# JVC

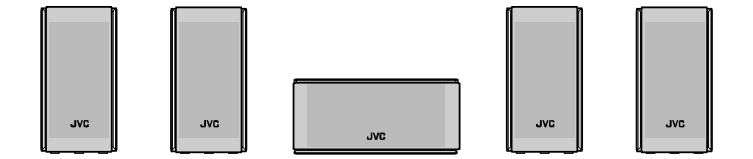
# SERVICE MANUAL

## DVD DIGITAL CINEMA SYSTEM

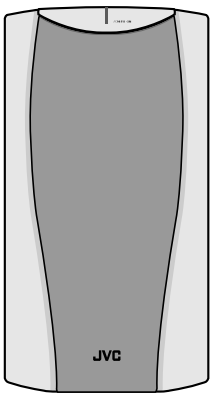
# TH-V70R

Area suffix

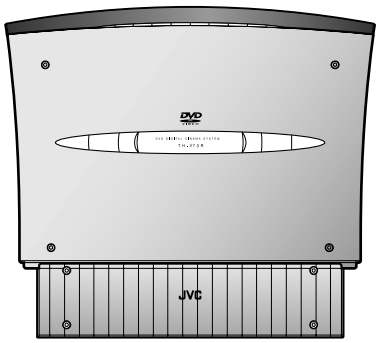
B ---------- U.K.
E ---------- Continental Europe
EN ---------- Northern Europe



SP-XSV70 SP-XSV70 SP-XCV70 SP-XSV70 SP-XSV70



SP-PWV70



XV-THV70R

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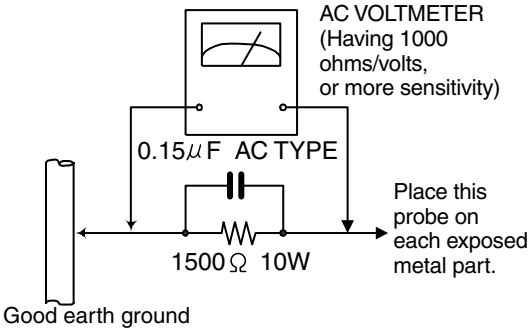
No.21108
Jul. 2002

## Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).




## Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

### ⚠ CAUTION

**Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (⬤) or identified by the "⚠" mark nearby are critical for safety.
(This regulation does not correspond to J and C version.)

## *Safety precautions* (U.K only)

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits.
2. Any unauthorised design alterations or additions will void the manufacturer's guarantee ; furthermore the manufacturer cannot accept responsibility for personal injury or property damage resulting therefrom.
3. Essential safety critical components are identified by ( ⚠ ) on the Parts List and by shading on the schematics, and must never be replaced by parts other than those listed in the manual. Please note however that many electrical and mechanical parts in the product have special safety related characteristics. These characteristics are often not evident from visual inspection. Parts other than specified by the manufacturer may not have the same safety characteristics as the recommended replacement parts shown in the Parts List of the Service Manual and may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

## *Warning*

1. Service should be performed by qualified personnel only.
2. This equipment has been designed and manufactured to meet international safety standards.
3. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
4. Repairs must be made in accordance with the relevant safety standards.
5. It is essential that safety critical components are replaced by approved parts.
6. If mains voltage selector is provided, check setting for local voltage.

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

# Preventing static electricity

## 1. Grounding to prevent damage by static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

## 2. About the earth processing for the destruction prevention by static electricity

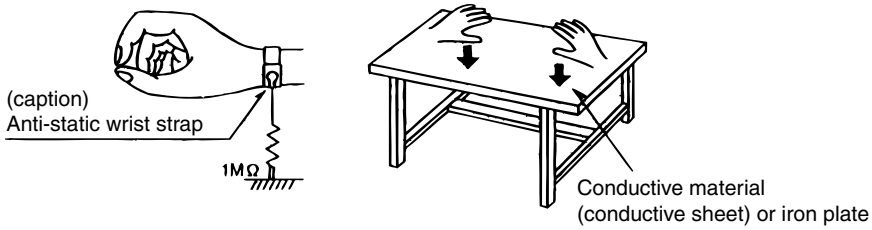
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players. Be careful to use proper grounding in the area where repairs are being performed.

### 2-1 Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

### 2-2 Ground yourself

Use an anti-static wrist strap to release any static electricity built up in your body.




## 3. Handling the optical pickup

1. In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)

2. Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

## 4. Handling the traverse unit (optical pickup)

1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.

2. Remove solder of the short lands on the flexible wire after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.

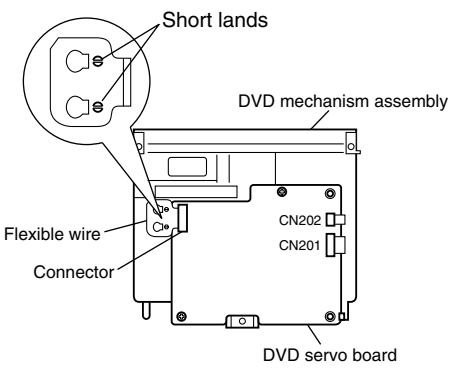
3. Handle the flexible wire carefully as it may break when subjected to strong force.

4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

## 5. Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for the DVD pickup unit.**

- Apply solder to the short lands before the flexible wire is disconnected from the connector on the DVD servo board.
  (If the flexible wire is disconnected without applying solder, the DVD pickup may be destroyed by static electricity.)
- In the assembly, be sure to remove solder from the short lands after connecting the flexible wire.



# Important for laser products

**1.CLASS 1 LASER PRODUCT**

**2.DANGER :** Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

**3.CAUTION :** There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

**4.CAUTION :** The compact disc player uses invisible laserradiation and is equipped with safety switches whichprevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.

**5.CAUTION :** If safety switches malfunction, the laser is able to function.

**6.CAUTION :** Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ ***CAUTION*** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

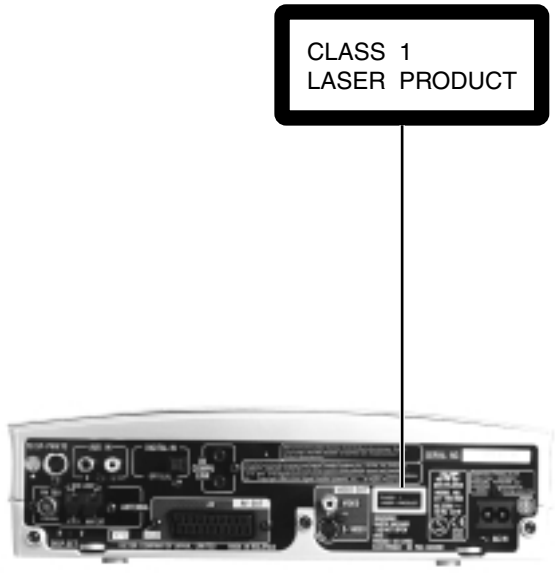
**VARNING :** Osynlig laserstrålning när denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

**VARO :** Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

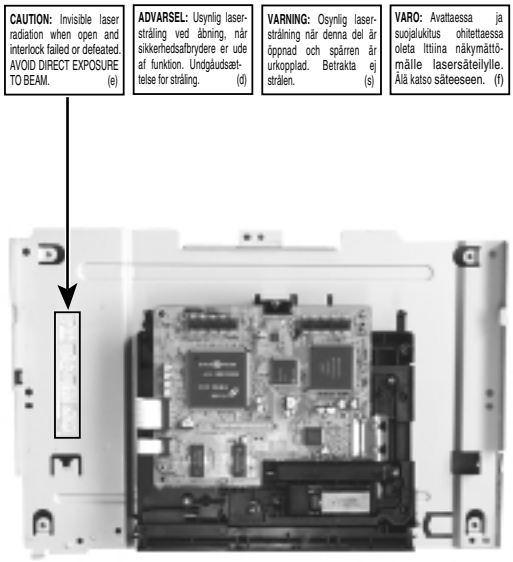
**ADVARSEL :** Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgåudsættelse for stråling.

**ADVARSEL :** Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

## REPRODUCTION AND POSITION OF LABELS




**WARNING LABEL**


CAUTION: Invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)
ADVARSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgåudsættelse for stråling. (d)
VARNING: Osynlig laserstrålning när denna del är öppnad och spårren är urkopplad. Betrakta ej strålen. (s)
VARO: Avattaessa ja suojalukitus ohitettaessa oleta ltiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)

# Disassembly method

## <Main body section>

### ■ Removing the top plate (See Fig. 1.)

From the top side of the main body, remove the four screws **A** attaching the top plate.

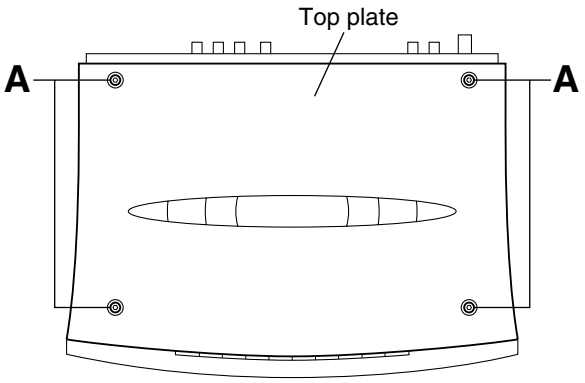



Fig.1

### ■ Removing the bottom panel

(See Figs. 2 and 3.)

1. From the rear side of the main body, remove the three screws **B** attaching the bottom panel.
2. From the bottom side of the main body, remove the two screws **C** attaching the bottom panel.
3. Remove the bottom panel in an upward direction.

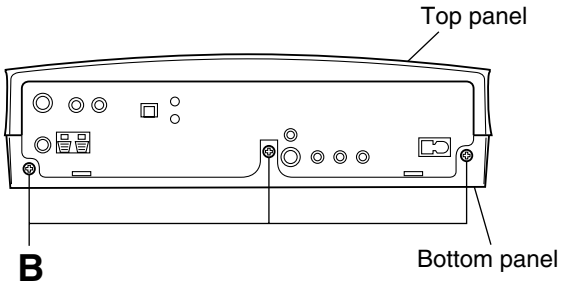



Fig.2

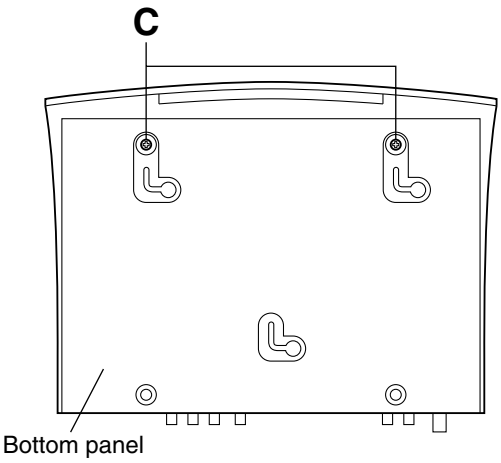



Fig.3

### ■ Removing the top panel (See Fig. 4.)

- Remove the top plate.
- Remove the bottom panel.

1. Slide the top panel toward the rear (direction of the arrow) and disengage it from the engagement sections **a** and **b** of the bottom chassis.
2. Remove the top panel in an upward direction.

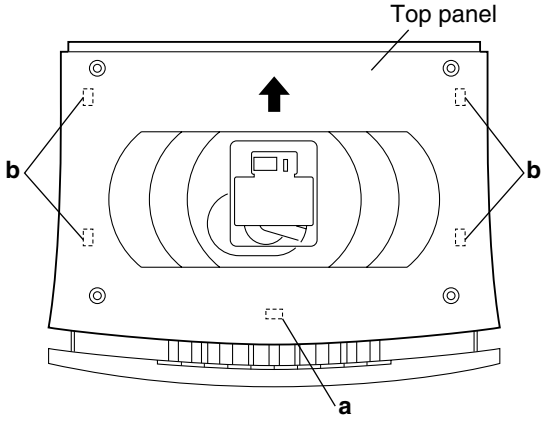



Fig.4

## ■ Removing the DVD mechanism assembly (See Figs. 5 and 6.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.

1. From the top side of the main body, disengage the claw **c** of the DVD mechanism assembly and then remove the push button.

2. Remove the five screws **D** and screw **E** attaching the DVD mechanism assembly.

3. Disconnect the wire from connector CN812 on the LED board.

4. Disconnect the connectors CN502 and CN503 on the DVD servo board from connectors CN801 and CN803 on the main board while lifting the DVD mechanism assembly in an upward direction.

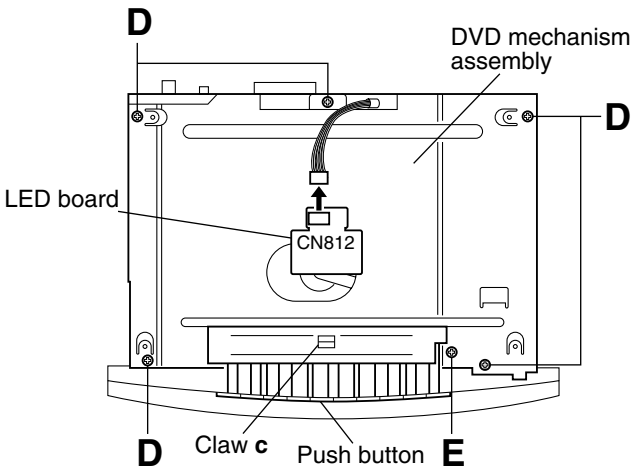



Fig.5

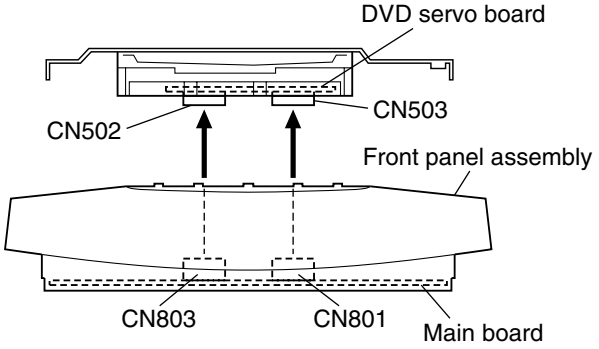



Fig.6

## ■ Removing the front panel assembly (See Figs. 7 and 8.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Remove the wire clamp bundling the wires of the front panel assembly.

2. Remove the card wire of the front panel assembly from the wire holder.

3. Disconnect the wires from connectors CN106 and CN814 on the main board.

4. Disconnect the card wires from connectors CN802 and CN813 on the main board.

5. From the front side of the main body, remove the two screws **F** attaching the front panel assembly.

6. Disengage the claws **d** of the front panel assembly from the bottom chassis and then remove the front panel assembly in the direction of the arrow.

**[Reference]**
- **Before attaching the front panel assembly, pass the card wire of the front panel assembly through the hole on the bottom chassis.**
- **After attaching the front panel assembly, bundle the wires and card wire of the front panel assembly using a wire clamp.**

**[Caution]**
- **In the assembly, arrange the wires and wire clamp so that they are not touch to the regulator IC(IC953).**

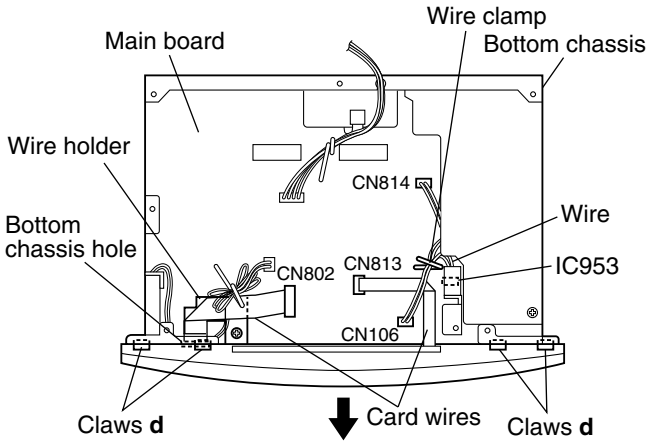



Fig.7

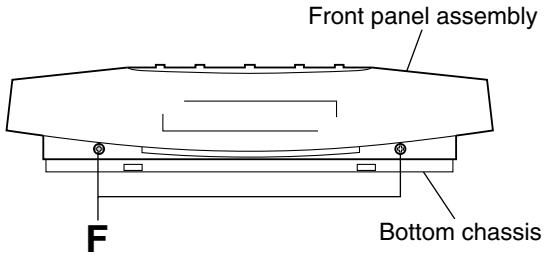



Fig.8

## ■ Removing the DSP/Audio board

(See Figs. 9 and 10.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. From the top side of the main body, remove a screw **G** attaching the DSP/Audio board.

2. From the rear side of the main body, remove the screw **H** and two screws **J** attaching the DSP/Audio board.

3. Take out the DSP/Audio board from the bottom chassis and then disconnect the card wire from connector CN806 on the main board.

**[Reference]**
- **Before attaching the DSP/Audio board, connect the card wire to the connector CN806 on the main board.**

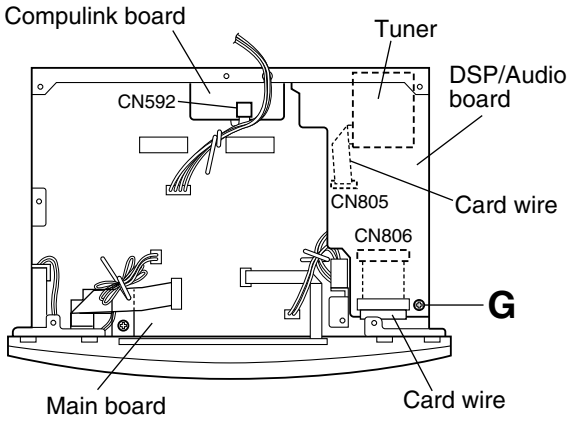



Fig.9

## ■ Removing the compulink board

(See Figs. 9 and 10.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Disconnect the card wire from connector CN592 on the compulink board.

2. From the rear side of the main body, remove the screw **K** attaching the compulink board.

3. Take out the compulink board from the bottom chassis.

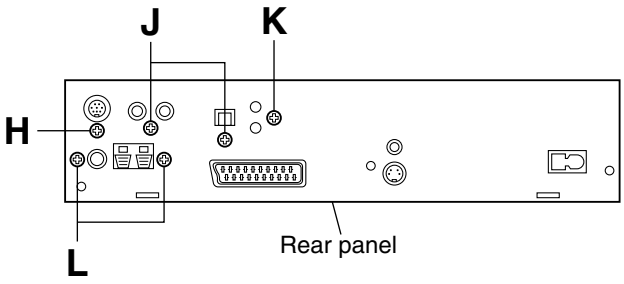



Fig.10

## ■ Removing the tuner

(See Figs. 9 and 10.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Disconnect the card wire from connector CN805 on the main board.

2. From the rear side of the main body, remove the two screws **L** attaching the tuner.

3. Take out the tuner from the bottom chassis.

## ■ Removing the main board

(See Figs. 11 and 12.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.
- Remove the front panel assembly.
- Remove the DSP/Audio board.

1. Disconnect the card wire from connector CN805 on the main board.
2. Remove the wire clamp bundling the fan motor wire and then disconnect the wire from connector CN972 on the main board.
3. Disconnect the card wire from connector CN592 on the compulink board.
4. Remove the five screws **M** and screw **M'** attaching the main board.
5. From the rear side of the main body, remove the four screws **N** attaching the main board.
6. Remove the rear panel with the tuner and compulink board.
7. Take out the main board from the bottom chassis.

**[Reference] Attaching the main board**
- **When attaching the screw M', attach the wire holder together with it.**
- **After connecting the wires to the connectors, bundle them using the wire clamp.**
- **Insert the DVD mechanism assembly wire into the notch on the bottom chassis.**

**(See Fig. 11.)**

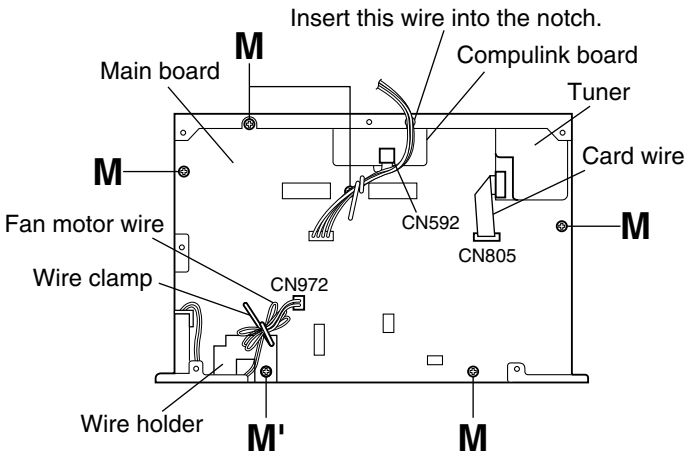



Fig.11

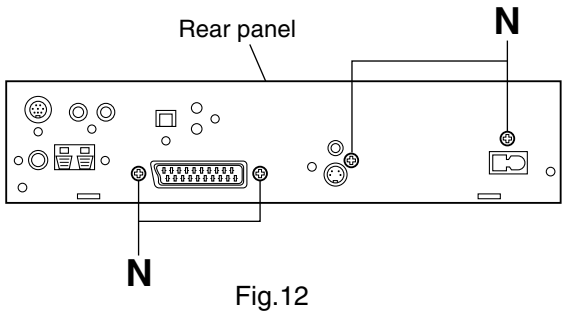



Fig.12

## ■ Removing the fan motor

(See Figs. 13 and 14.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Remove the wire clamp and tie band bundling the fan motor wire.
2. Disconnect the wire from connector CN972 on the main board.
3. From the left side of the main body, remove the two screws **P** attaching the fan motor.

**[Reference]**
- **After mounting the fan motor, bundle the fan motor wire using the wire clamp.**

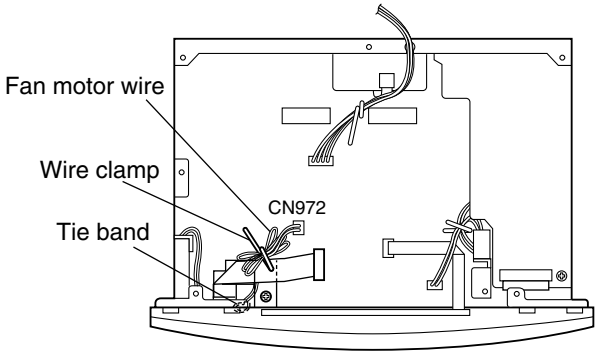



Fig.13

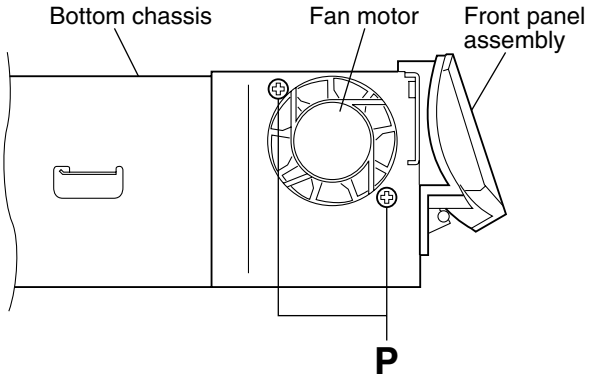



Fig.14

## <Front panel assembly section>

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.
- Remove the front panel assembly.

### ■ Removing the switch board

(See Fig. 15.)

From the back side of the front panel assembly, remove the four screws **Q** attaching the switch board.

### ■ Removing the open/close board

(See Figs. 15 and 16.)

1. From the back side of the front panel assembly, remove the two screws **R** attaching the door motor assembly.

2. Remove the screw **S** attaching the open/close board of the door motor assembly.

### ■ Removing the door motor (See Fig. 16.)

- Remove the door motor assembly.

1. Remove the stop washers attaching the clutch assembly and gear 2.

2. Remove the clutch assembly, washer and Gear 2.

3. Remove the two screws **T** attaching the door motor.

### ■ Removing the front board

(See Figs. 17 to 20.)

1. While widening section **e** of the front base in the direction of the arrow, remove the rod gear assembly.

2. Slide the moving panel assembly all the way in the direction of the arrow.

3. While slightly widening sections **f** toward the front, take out the moving panel assembly in the direction of the arrow.

4. Remove the two screws **W** attaching the moving base of the moving panel assembly.

5. Disengage the engagement sections **g** on the inside of the moving base and at the inside of the moving panel assembly and remove the moving base.

6. Remove the two screws **X** attaching the front board.

7. Disengage the claws **h** of the moving panel and remove the front board.

**[Reference]**
- **Before attaching the moving base, pass the card wire of the front board through the hole on the moving base. (See Fig.19.)**

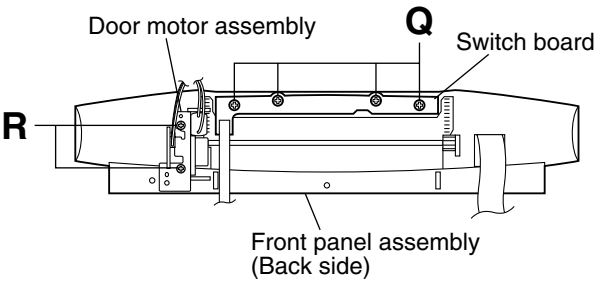



Fig.15

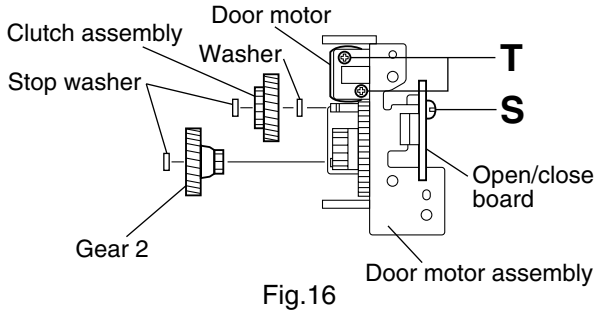



Fig.16

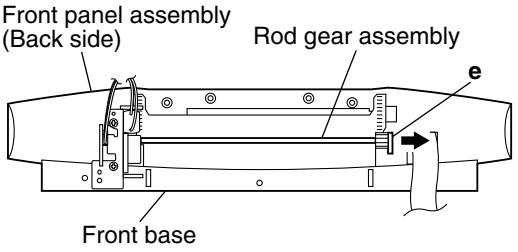



Fig.17

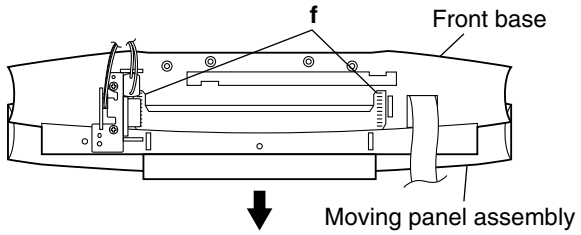



Fig.18

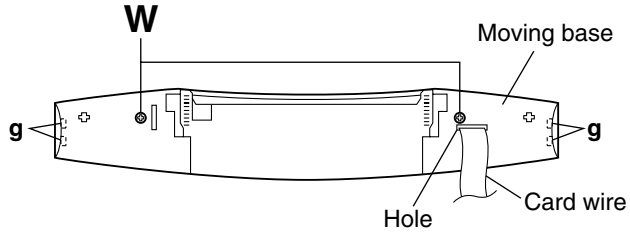



Fig.19

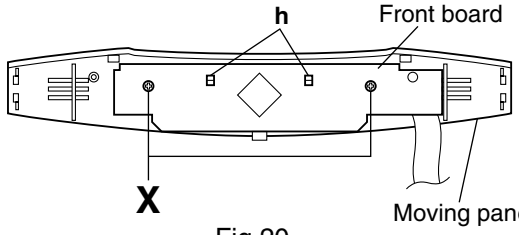



Fig.20

## <DVD mechanism assembly section>

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

### ■ Removing the LED board (See Fig. 1.)

From the top side of the DVD mechanism assembly, disengage the claw **a** of the top chassis attaching the LED board and then remove the LED board.

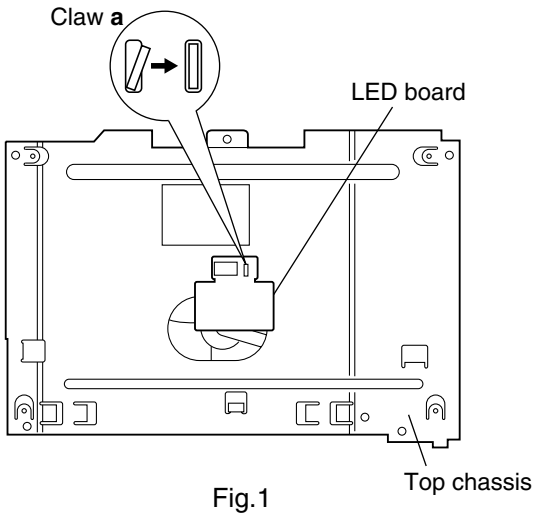



Fig.1

### ■ Removing the DVD mechanism assembly (See Fig. 2.)

1. Extend the both sides of the protector, and then raise the protector in the direction of the arrow.

2. Remove the three screws **A** attaching the DVD mechanism assembly on the top chassis.

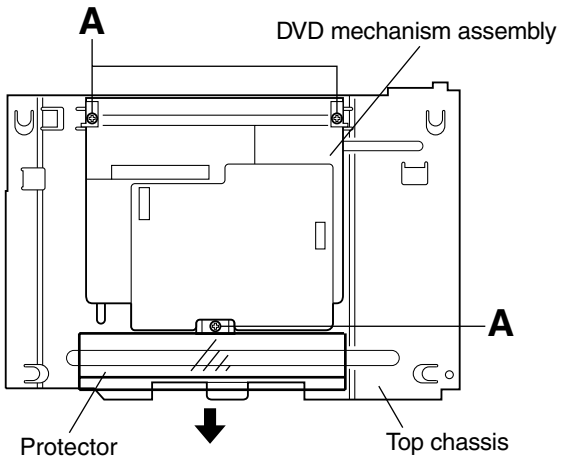



Fig.2

### ■ Removing the DVD servo board (See Fig. 3.)

**[Caution] · Be sure to solder the short land sections b on the flexible wire before disconnecting the flexible wire from connector CN101 on the DVD servo board.**
**If the flexible wire is disconnected without attaching solder, the pickup unit may be destroyed by static electricity.**

1. From the back side of the DVD mechanism assembly, attach solder to the short land sections **b** of the flexible wire that is connected to the connector CN101 of the DVD servo board.

2. Disconnect the flexible wire from connector CN101 on the DVD servo board.

3. Disconnect the card wires from connectors CN201 and CN202 on the DVD servo board.

4. Remove the two screws **B** attaching the DVD servo board.

5. While pushing the claw **c** of the DVD mechanism assembly in the direction of the arrow, remove the DVD servo board from the projections **d** and **e** in an upward direction.

**[Caution] · In the assembly, be sure to remove solder from the short land sections b after connecting the flexible wire.**

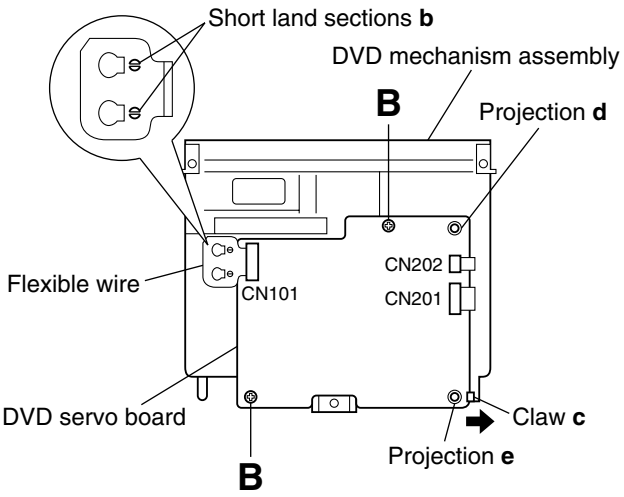



Fig.3

## ■ Removing the DVD traverse mechanism assembly (See Fig. 4.)

- Remove the DVD servo board.

1. Remove the two screws **C** attaching the DVD traverse mechanism assembly.
2. Disengage the claw **f** attaching the DVD traverse mechanism assembly and then take out the DVD traverse mechanism assembly.

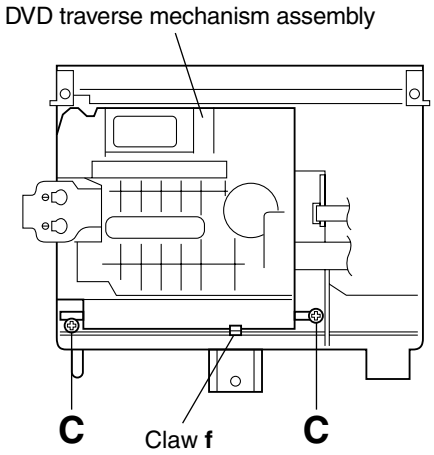



Fig.4

## ■ Removing the DVD pickup unit (See Figs. 5 to 7.)

- Remove the DVD servo board.
- Remove the DVD traverse mechanism assembly.

1. From the top side of the DVD traverse mechanism assembly, remove the screw **D** attaching the bracket.
2. Remove the claw **g** attaching the thrust spring and then take out the torsion spring.
3. Remove the lead screw from the section **h** and then remove the shaft from the section **i**.
4. Disengage the section **j** of the DVD pickup unit and then remove the DVD pickup unit with the shaft.
5. Pull the shaft out of the DVD pickup unit.
6. Remove the two screws **E** attaching the SW. actuator.

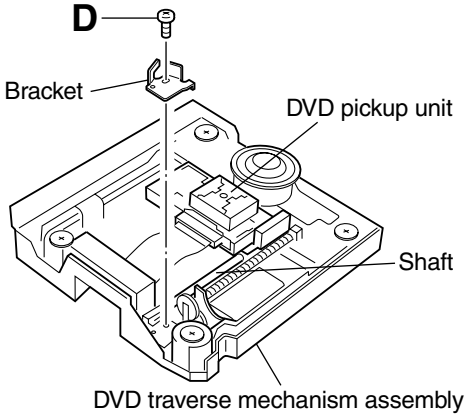



Fig.5

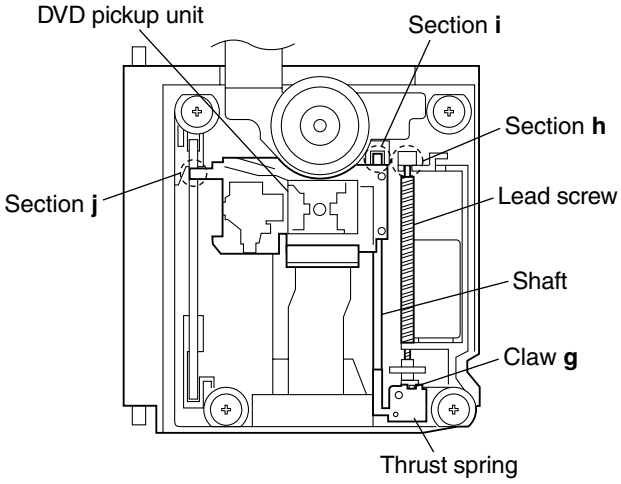



Fig.6

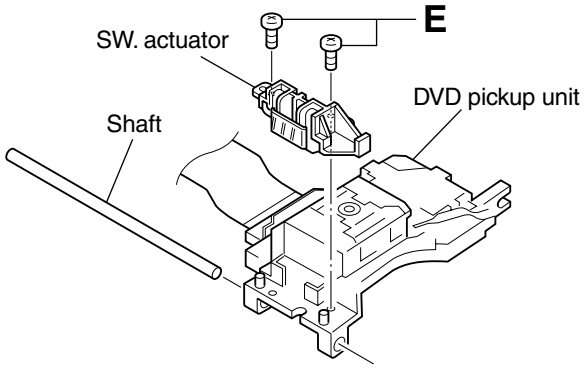



Fig.7

## ■ Attaching the DVD pickup unit

(See Figs. 5 to 9.)

**[Reference]**
**Refer to the explanation of "Removing the DVD pickup unit" on the preceding page.**

1. Attach the SW. actuator and shaft to the DVD pickup unit. **(See Fig.7.)**

2. Engage the section **j** of the DVD pickup unit to the shaft of the DVD traverse mechanism assembly first, and set the both ends of the shaft of the DVD pickup unit in the sections **i** and **i'** of the DVD traverse mechanism assembly.

3. Slide the DVD pickup unit all the way in the direction of the arrow.

4. Mesh the lead screw to the section **k** of DVD pickup unit and then set the end of the lead screw to the section **h**.

5. Attach the thrust spring. **(See Fig.6.)**

6. Attach the bracket. **(See Fig.5.)**

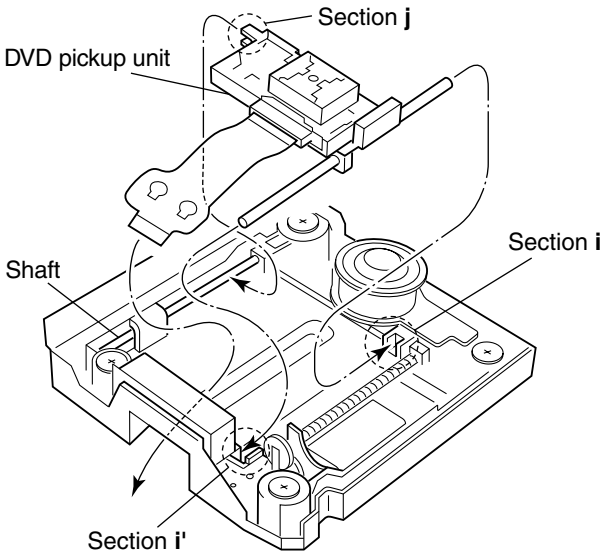



Fig.8

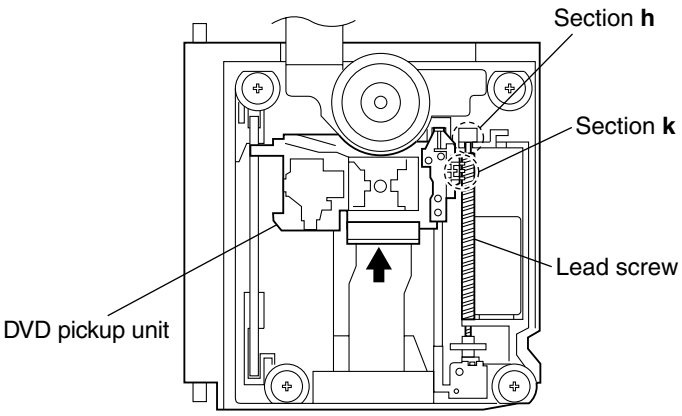



Fig.9

## ■ Removing the spindle motor board

(See Figs. 10 and 11.)

- Remove the DVD servo board.
- Remove the DVD traverse mechanism assembly.

1. From the top side of the DVD traverse mechanism assembly, remove the feed motor wire that is soldered to the spindle motor board.

2. From the back side of the DVD traverse mechanism assembly, remove the three screws **F** attaching the spindle motor board.

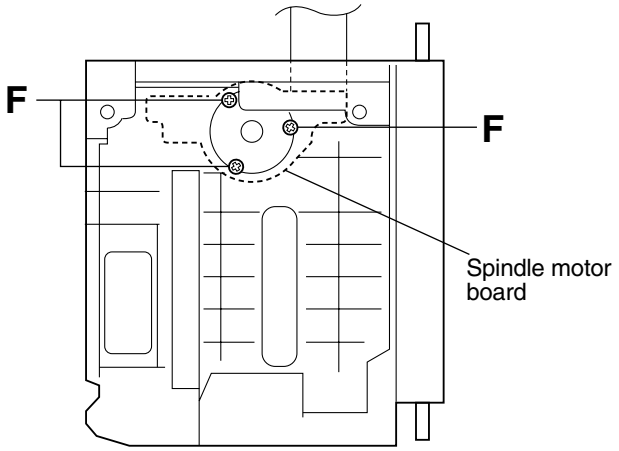



Fig.11

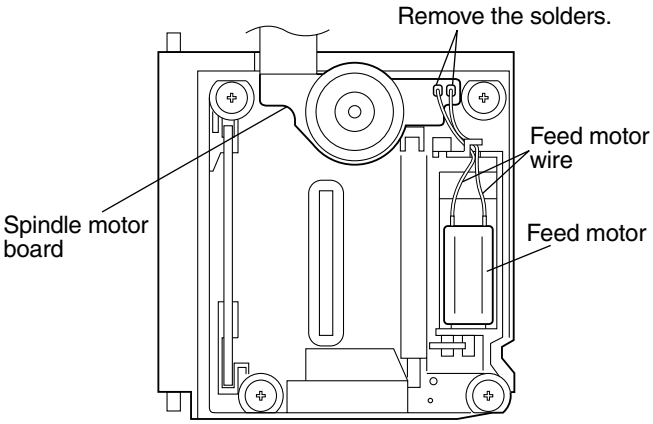



Fig.10

## ■ Removing the feed motor

(See Figs. 12 to 14.)

- Remove the DVD servo board.
- Remove the DVD traverse mechanism assembly.

1. Remove the four screws **G** attaching the traverse mechanism assembly.
2. Take out the traverse mechanism assembly from the mechanism base.
3. Remove the screw **D** attaching the bracket and take out the bracket.
4. Disengage the claw **g** attaching the thrust spring and take out the thrust spring.
5. Pull out the lead screw in the direction of the arrow.
6. Remove the feed gear M.
7. Remove the feed motor wire that is soldered to the spindle motor board.
8. Remove the two screws **H** attaching the feed motor and take out the feed motor.

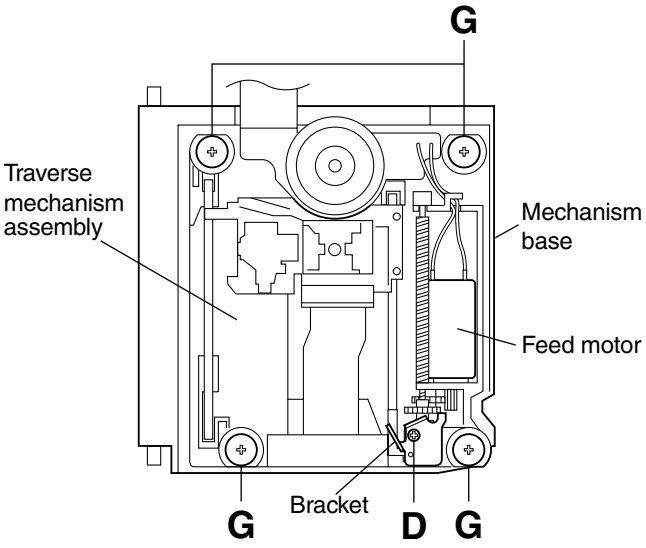



Fig.12

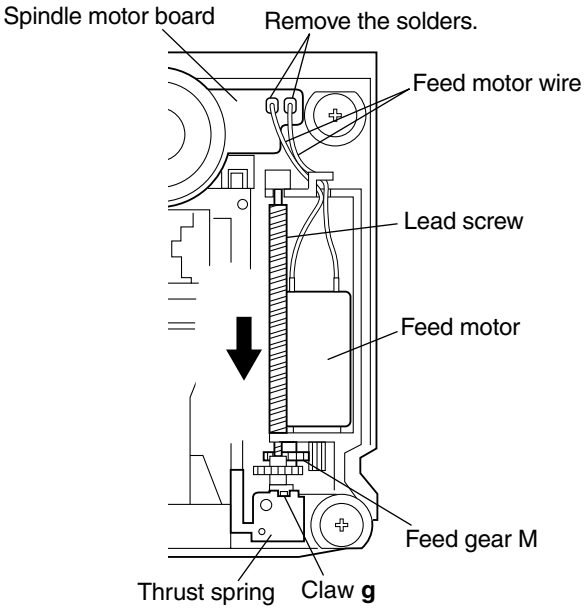



Fig.13

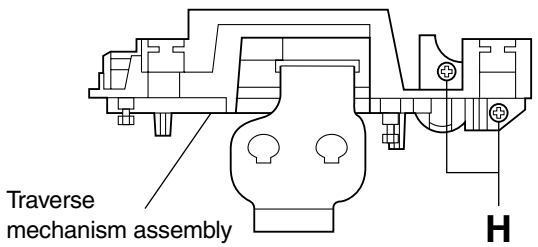



Fig.14

## ■ Removing the switch board

(See Fig.15.)

- Remove the DVD mechanism assembly.

1. From the top side of the CD mechanism assembly, remove the screw **J** attaching the switch board.

2. Lift the switch board slightly and then remove the wire from connector CN101 on the switch board.

## ■ Removing the loading motor assembly

(See Figs.3, 15 to 17.)

- Remove the DVD mechanism assembly.

1. From the back side of the DVD mechanism assembly, disconnect the card wire from connector CN202 on the DVD servo board. **(See Fig.3.)**

2. From the top side of the CD mechanism assembly, remove the two screws **K** attaching the clamper base assembly.

3. Disconnect the wire from connector CN101 on the switch board while lifting the clamper base assembly slightly and remove the clamper base assembly.

4. Remove the three screws **L** attaching the roller holder assembly and take out the roller holder assembly.

5. Disconnect the wires from connectors CN103 and CN104 on the loading motor assembly.

6. Remove the belt of the loading motor assembly.

7. Remove the two screws **M** attaching the loading motor assembly and take out the loading motor assembly.

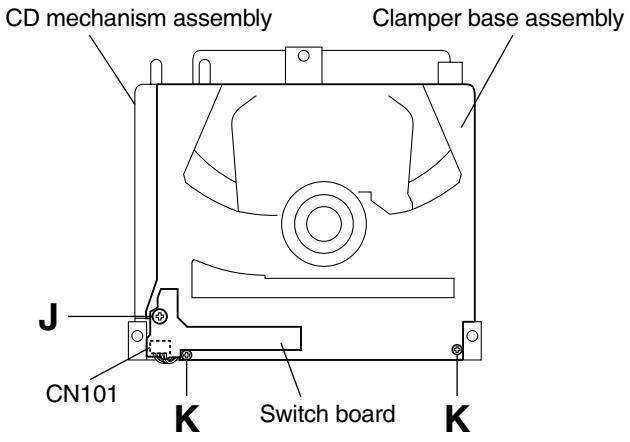



Fig.15

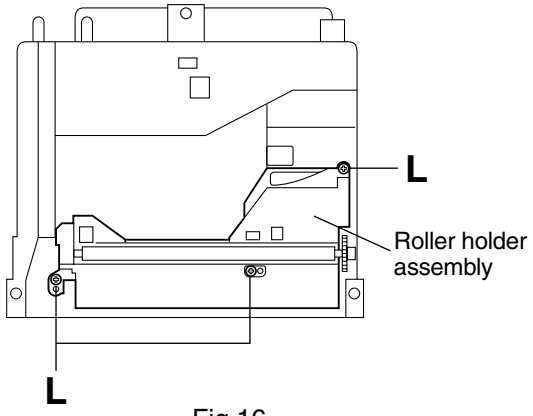



Fig.16

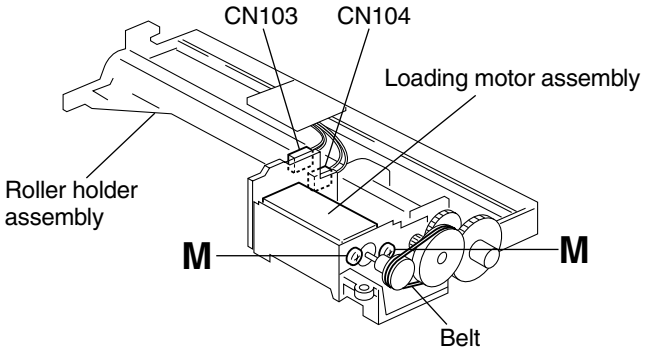



Fig.17

## <Speaker section>

### ■ Removing the amplifier assembly

(See Figs. 1 and 2.)

1. From the rear side of the speaker main body, remove the four screws **A** attaching the heat sink cover and then remove the heat sink cover.

2. Remove the eight screws **B** attaching the amplifier assembly.

3. Move the amplifier assembly backward and disconnect the wire from connector CN109 in the lower part of the amplifier assembly.

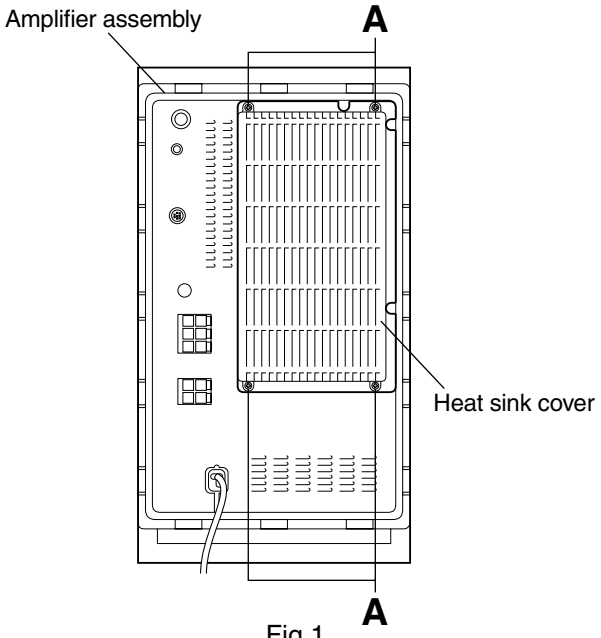



Fig.1

### ■ Removing the rear panel (See Fig. 3.)

- Remove the amplifier assembly.

1. Pull out the knob.

2. Remove the ten screws **C**, ten screws **D** and screw **E** attaching the rear panel.

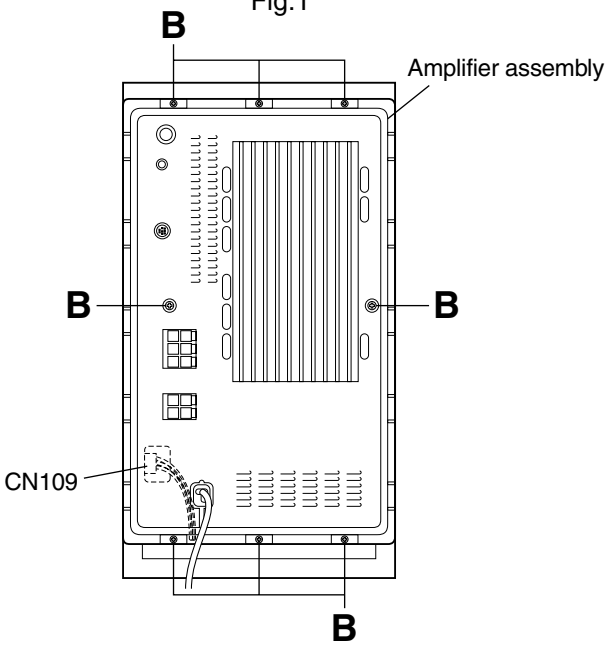



Fig.2

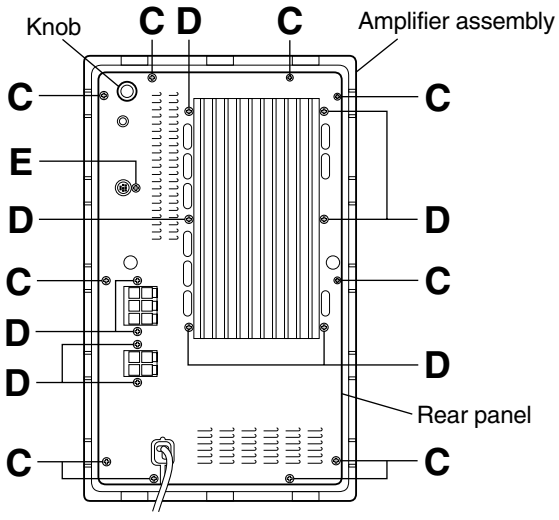



Fig.3

## ■ Removing the pre-amplifier board

(See Figs. 4 to 6.)

- Remove the rear panel.

1. Remove the two screws **F** attaching the volume bracket.
2. Disconnect the pre-amplifier board from the connector CN201 on the mother board and take out the pre-amplifier board.
3. Pull out the push button.
4. Remove the two screws **G** and nut attaching the volume bracket.

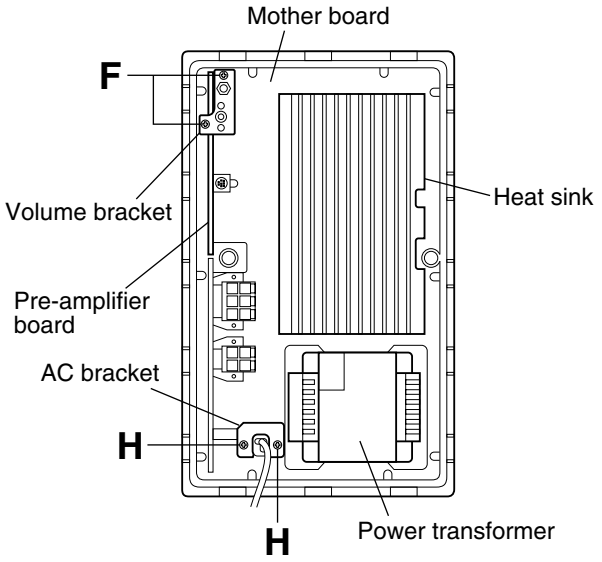



Fig.4

## ■ Removing the power supply & SP terminal board

(See Figs. 4 and 5.)

- Remove the rear panel.

1. Remove the two screws **H** attaching the AC bracket.
2. Disconnect the power supply & SP terminal board from the connectors CN210 and CN211 on the mother board.
3. Disconnect the wire from connector CN107 on the power supply & SP terminal board.
4. Disconnect the power cord from connector CN108 on the power supply & SP terminal board.

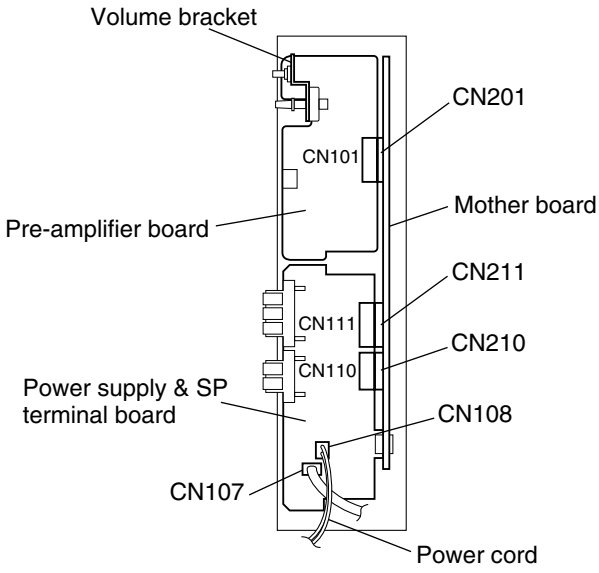



Fig.5

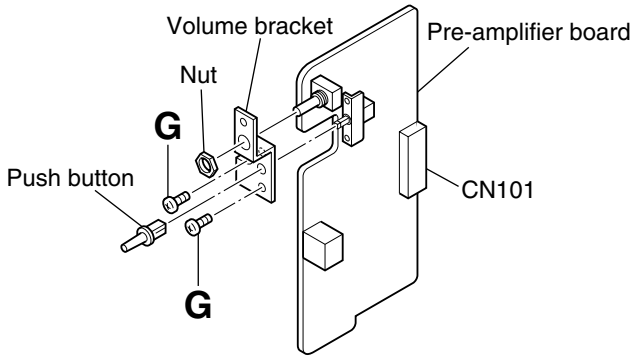



Fig.6

## ■ Removing the mother board

(See Figs. 7 and 8.)

- Remove the rear panel.
- Remove the pre-amplifier board.
- Remove the power supply & SP terminal board.

1. Disconnect the wire from the connector CN104 on the mother board.

2. Remove the seven screws **J** attaching the mother board.

3. Take out the mother board with the power amplifier board (A,B).

4. From the bottom side of the mother board, remove the two screws **K** and two screws **L** attaching the power amplifier board (A,B).

5. Remove the power amplifier board (A,B) from connectors CN202, CN203, CN205 and CN206 on the mother board.

## ■ Removing the power amplifier board (A)

(See Figs. 9 and 10.)

- Remove the mother board.

1. Remove the four screws **M** attaching the heat sink to the power amplifier board (A).

2. From the bottom side of the power amplifier board (A), disengage the four engagement sections **a**.

3. From the top side of the power amplifier board (A), slide the P.TR holder (A) in the direction of the arrow to disengage the engagement section **b** and remove the power amplifier board (A) from the P.TR holder (A).

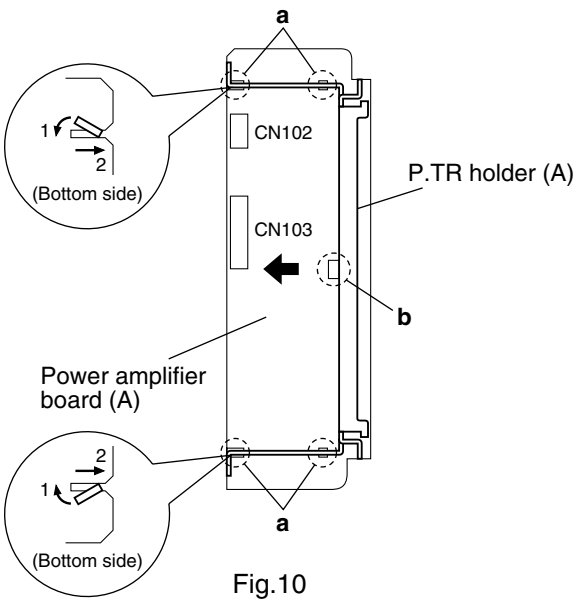



Fig.10

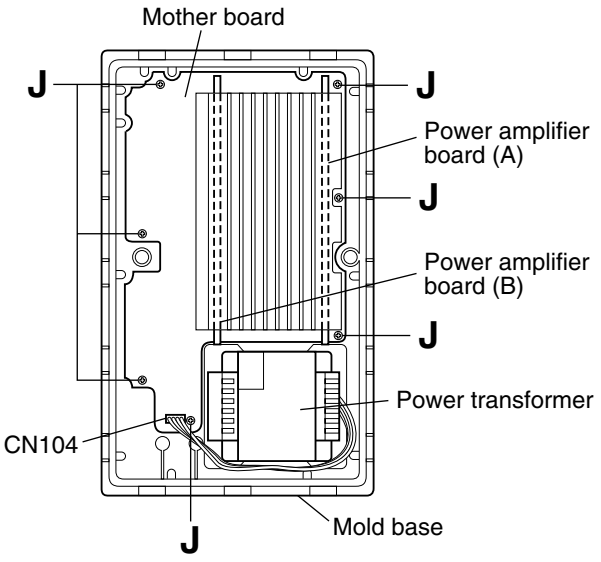



Fig.7

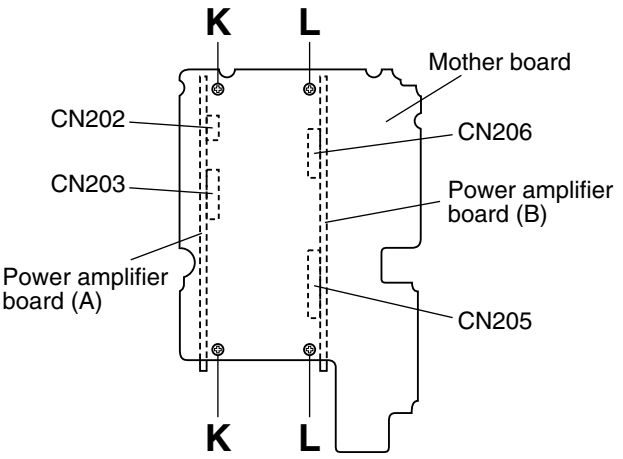



Fig.8

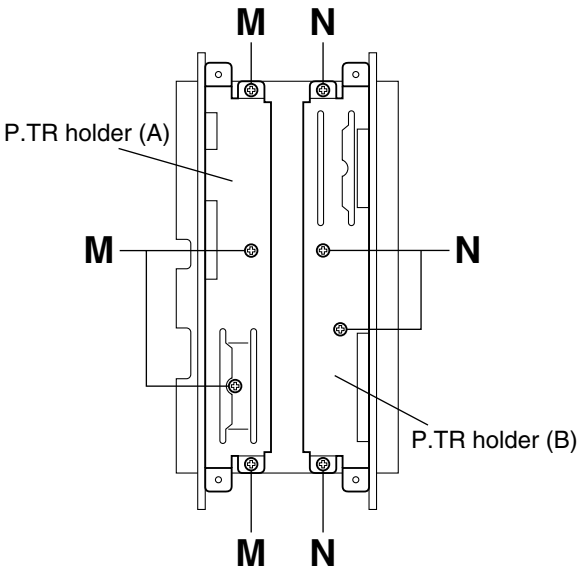



Fig.9

## ■ Removing the power amplifier board (B) (See Figs. 9 and 11.)

- Remove the mother board.

1. Remove the four screws **N** attaching the heat sink to the power amplifier board (B). **(See Fig.9.)**

2. From the bottom side of the power amplifier board (B), disengage the four engagement sections **c**.

3. From the top side of the power amplifier board (B), slide the P.TR holder (B) in the direction of the arrow to disengage the engagement section **d** and remove the power amplifier board (B) from the P.TR holder (B).

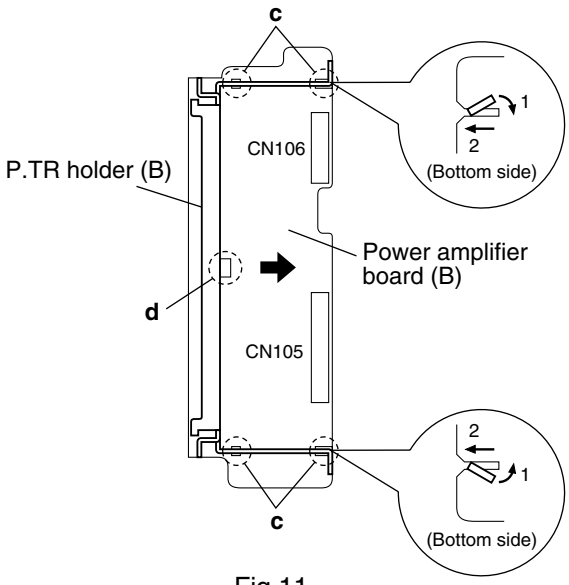



Fig.11

## ■ Removing the power transformer (See Figs. 12 and 13.)

- Remove the rear panel.

1. Remove the wire from the connector CN104 on the mother board.

2. Disconnect the wire from the connector CN107 on the power supply & SP terminal board.

3. Remove the four screws **P** attaching the power transformer and then remove the power transformer from the transformer bracket of the mold base.

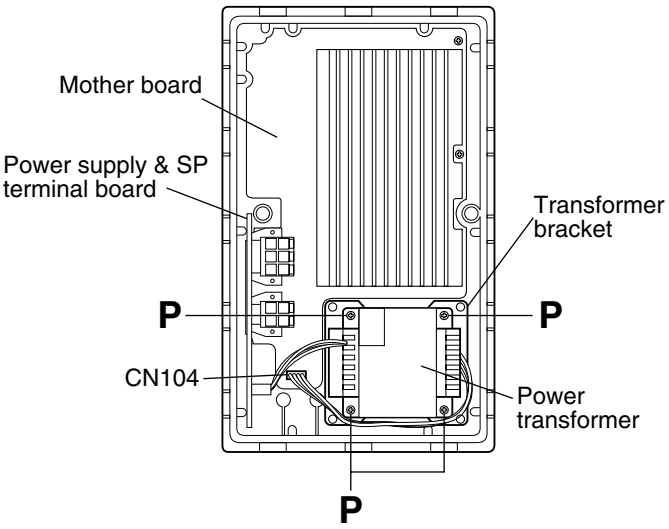



Fig.12

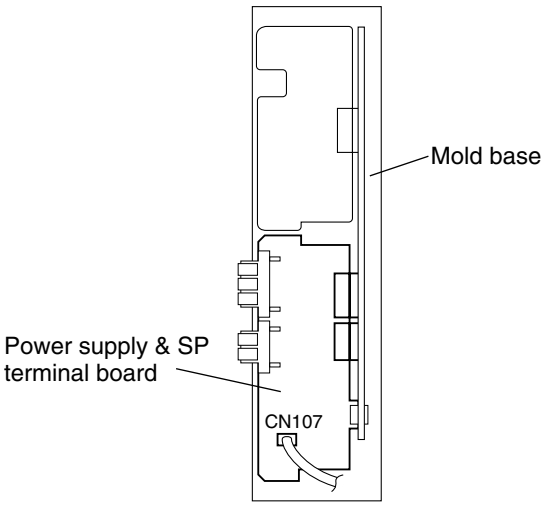



Fig.13

## ■ Removing the LED indicator

(See Figs. 14 to 16.)

1. Insert the tip of a flat-bladed screwdriver or a similar tool into the space between the speaker main body and the ornament panel (the section indicated by the arrows), and lift the net little by little to remove.

| | |
|---|---|
| **[Note]** | **To prevent damaging the ornament panel and speaker main body, insert cushioning plates etc. above and below the tip of the flat-bladed screwdriver or a similar tool.** |

2. From the back side of the ornament panel, remove the two screws **Q** attaching the LED indicator.

3. Disconnect the wire from connector CN109 on the LED indicator.

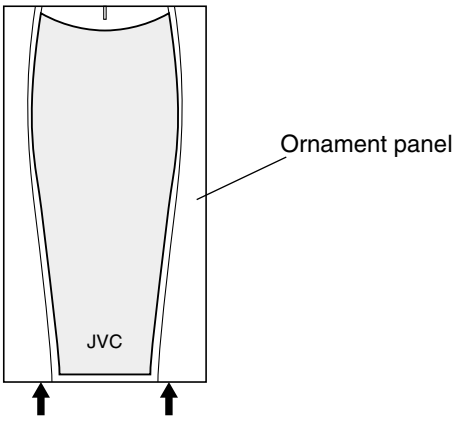



Fig.14

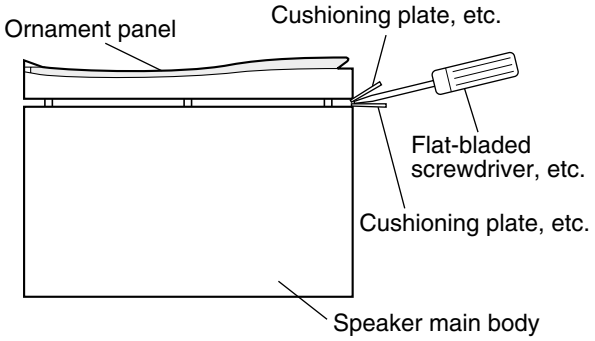



Fig.15

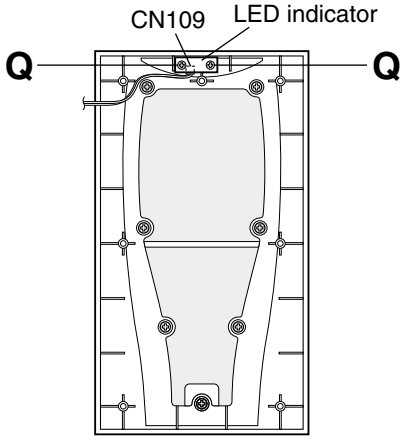



Fig.16

## ■ Removing the speaker

(See Figs. 17 and 18.)

1. Remove the eight screws **R** attaching the speaker.

2. Take out the speaker.

3. Disconnect the wires from the terminals of the speaker.

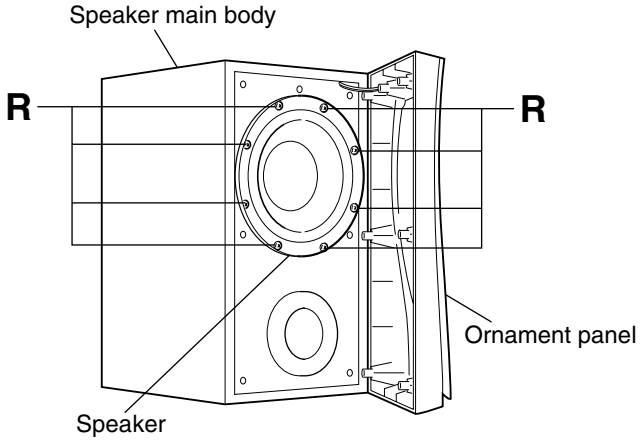



Fig.17

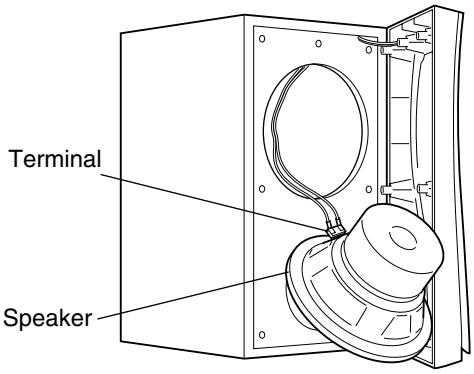
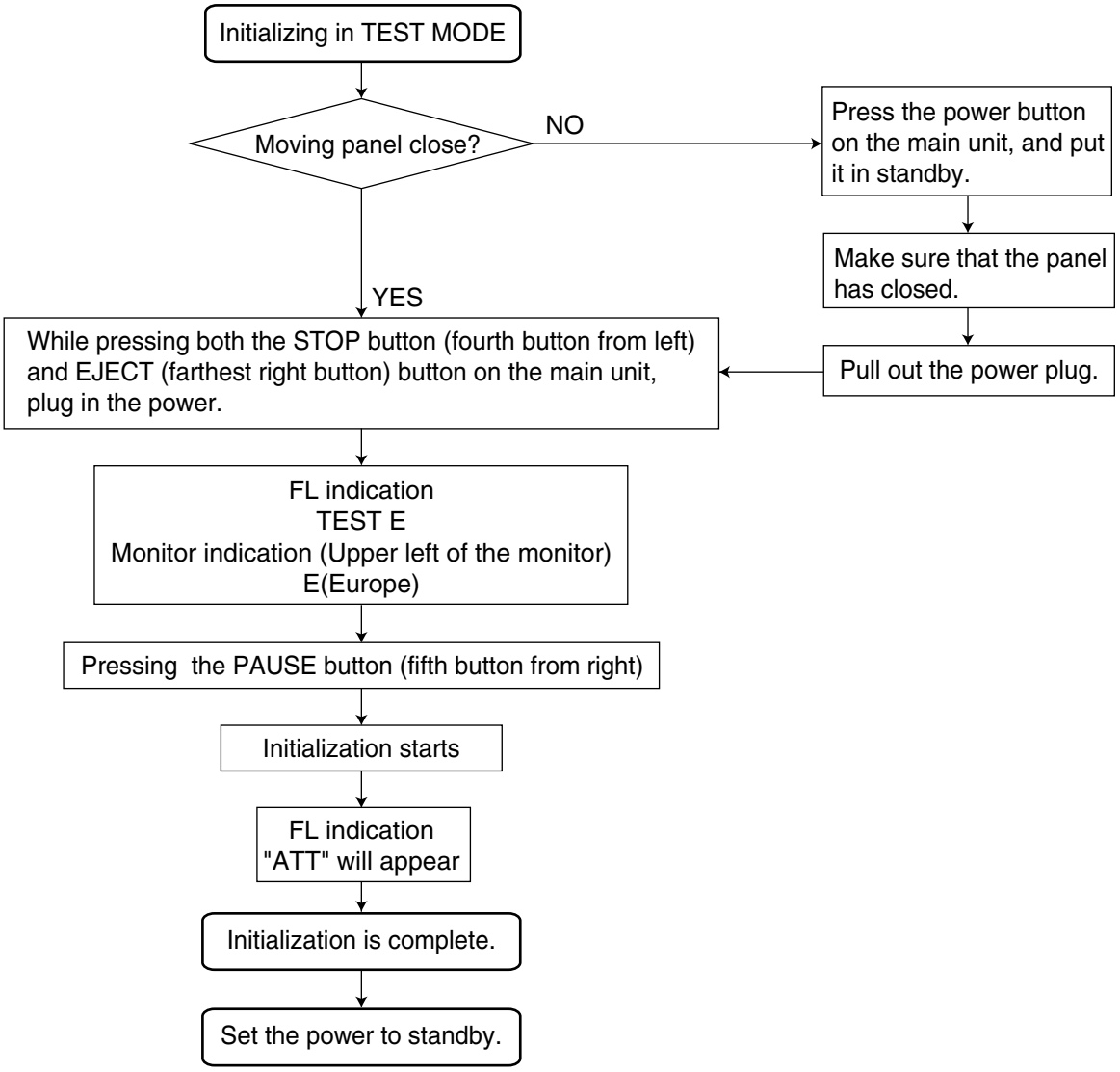



Fig.18

# Adjustment method

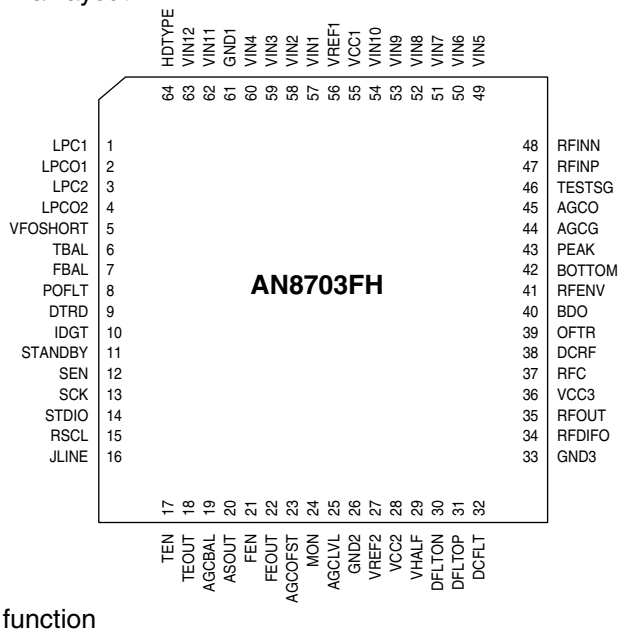
## ■ Initializing in TEST MODE


Initializing in TEST MODE
Moving panel close?
NO
Press the power button on the main unit, and put it in standby.
Make sure that the panel has closed.
Pull out the power plug.
YES
While pressing both the STOP button (fourth button from left) and EJECT (farthest right button) button on the main unit, plug in the power.
FL indication
TEST E
Monitor indication (Upper left of the monitor)
E(Europe)
Pressing the PAUSE button (fifth button from right)
Initialization starts
FL indication
"ATT" will appear
Initialization is complete.
Set the power to standby.

# Description of major ICs

## ■ AN8703FH (IC101) : Frontend processor for DVD

1.Terminal layout



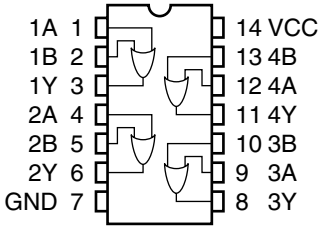

2. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | LPC1 | I | Laser pin input (DVD head) |
| 2 | LPCO1 | O | Laser drive output (DVD head) |
| 3 | LPC2 | I | Laser pin input (CD head) |
| 4 | LPCO2 | O | Laser drive output (CD head) |
| 5 | VFOSHORT | I | VFOSHORT control |
| 6 | TBAL | I | Tracking balance control |
| 7 | FBAL | I | Focus balance control |
| 8 | POFLT | O | Track detection threshold level |
| 9 | DTRD | I | Data slice data read signal input (for RAM) |
| 10 | IDGT | I | Data slice address gate signal input (for RAM) |
| 11 | STANDBY | I | Standby mode control |
| 12 | SEN | I | SEN(Serial data input) |
| 13 | SCK | I | SCK(Serial data input) |
| 14 | STDIO | I/O | STDI(Serial data I/O) |
| 15 | RSCL | I | Reference current supply |
| 16 | JLINE | I | J-line current setting |
| 17 | TEN | I | Tracking error amplifier inverted input |
| 18 | TEOUT | O | Tracking error signal output |
| 19 | AGCBAL | I | Offset adjustment for DRC-1 |
| 20 | ASOUT | O | Full addition signal output |
| 21 | FEN | I | Focus error amplifier inverted input |
| 22 | FEOUT | O | Focus error signal output |
| 23 | AGCOFST | I | Offset adjustment for DRC-2 |
| 24 | MON | - | Not use (Monitor) |
| 25 | AGCLVL | I | Output amplitude adjustment for DRC |
| 26 | GND2 | - | Ground 2 |
| 27 | VREF2 | O | VREF2 voltage output |
| 28 | VCC2 | - | Power supply 2 (5V) |
| 29 | VHALF | O | VHALF voltage output |
| 30 | DFLTON | O | Filter amplifier inverted output |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 31 | DFLTOP | O | Filter amplifier positive output |
| 32 | DCFLT | O | Filter output capacitance connection |
| 33 | GND3 | - | Ground 3 |
| 34 | RFDIFO | - | Radial differential output (Not use) |
| 35 | RFOUT | O | RF full-addition amplifier output |
| 36 | VCC3 | - | Power supply 3 (3.3V) |
| 37 | RFC | I | Filter for RF-group delay correction amplifier |
| 38 | DCRF | O | DC-cut filter for RF full-addition amplifier |
| 39 | OFTR | O | OFTR output |
| 40 | BDO | O | BDO output |
| 41 | RFENV | O | RF envelope output |
| 42 | BOTTOM | O | Bottom envelope detection filter |
| 43 | PEAK | O | Peak envelope detection filter |
| 44 | AGCG | O | AGC amplifier gain control |
| 45 | AGCO | O | AGC amplifier level control |
| 46 | TESTSG | I | TEST signal input |
| 47 | RFINP | I | RF signal positive input |
| 48 | RFINN | I | RF signal inverted input |
| 49 | VIN5 | I | Internal four-partition (CD) RF input 1 |
| 50 | VIN6 | I | Internal four-partition (CD) RF input 2 |
| 51 | VIN7 | I | Internal four-partition (CD) RF input 3 |
| 52 | VIN8 | I | Internal four-partition (CD) RF input 4 |
| 53 | VIN9 | I | External two-partition (DVD) RF input 2 |
| 54 | VIN10 | I | External two-partition (DVD) RF input 1 |
| 55 | VCC1 | - | Power supply 1 (5V) |
| 56 | VREF1 | O | VREF1 voltage output |
| 57 | VIN1 | I | Internal four-partition (DVD) RF input 1 |
| 58 | VIN2 | I | Internal four-partition (DVD) RF input 2 |
| 59 | VIN3 | I | Internal four-partition (DVD) RF input 3 |
| 60 | VIN4 | I | Internal four-partition (DVD) RF input 4 |
| 61 | GND1 | - | Ground 1 |
| 62 | VIN11 | I | 3-beam sub (CD) input 2 |
| 63 | VIN12 | I | 3-beam sub (CD) input 1 |
| 64 | HDTYPE | I | HD type selection |

## ■ MM74HCT32MTC / 74LCX32MTC (IC521 / IC522) : Quad 2 input OR gate

1. Terminal layout & Block diagram



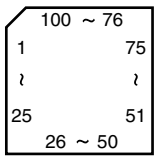

(TOP VIEW)

2. Truth table

| INPUTS | | OUTPUT |
|---|---|---|
| A | B | Y |
| L | L | L |
| L | H | H |
| H | L | H |
| H | H | H |

## ■ MN101C49GKD1 (IC801) : System micon

1.Terminal layout



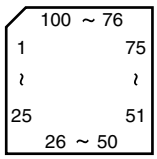

2. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | VREF- | - | Connect to ground |
| 2 | NTSEL(RGB--SEL) | I | NTSC/PAL discrimination(RGB/YC switching discrimination) signal |
| 3 | VER/HOR SEL | I | Vertical/Horizontal setting discrimination signal |
| 4 | SW1 | I | Slide door switch1 |
| 5 | PHOTOSW | I | Loading mechanism photo switch |
| 6 | LOCK | I | Slide door lock detection(AD) |
| 7 | VERSION | I | Area discrimination signal |
| 8 | KEY1 | I | Key input1 (AD) |
| 9 | KEY2 | I | Key input2 (AD) |
| 10 | VREF+ | - | Reference power supply |
| 11 | VDD | - | Power supply |
| 12 | OSC2 | O | Oscillator output (8MHz) |
| 13 | OSC1 | I | Oscillator input (8MHz) |
| 14,17,28, 31,32 | GND | - | Ground |
| 15 | XI | O | Not used (Connect to ground) |
| 16 | XO | I | Not used (Not connect) |
| 18 | DI-DO | O | PANECON serial communication data output |
| 19 | D.O.MUTE | O | MP3/JPEG mode: H (for DVD disc) |
| 20 | DI-CK | O | PANECON serial communication clock |
| 21 | RXD (DATA OUT) | O | Serial communication data output for PANTERA |
| 22 | TXD (DATA IN) | I | Serial communication data input for PANTERA |
| 23 | SCLK | I | Serial communication clock for PANTERA |
| 24 | CS | O | Transmit request for PANTERA communication |
| 25 | CPU-RESET | O | Reset signal for PANTERA |
| 26 | INTP | I | Receive request for PANTERA communication (Interruption) |
| 27 | REMOCON | I | Remote control signal input (interruption) |
| 29 | RDS ST | I | RDS communication strobe (interruption) |
| 30 | SAFETY1 | I | Short detecting signal 1 |
| 33 | RESET | I | Syscon reset input |
| 34 | DSP RST | O | DSP micom reset input |
| 35 | DSP RDY | O | DSP micom ready |
| 36 | AVC-OUT | O | AV compulink output |
| 37 | AVC-IN | I | AV compulink input |
| 38 | VIDEO-MUTE1 | O | Video driver mute 1 control |
| 39 | VIDEO-MUTE2 | O | Video driver mute 2 control |
| 40 | VIDEO-Y/C-MIX | O | Video driver YCMIX control |
| 41 | VIDEO-RGB | O | Video driver RGB control |
| 42 | DSP-COM | O | DSP serial communication data output |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 43 | DSP-STAT | I | DSP serial communication data input |
| 44 | DSP-CLK | O | DSP serial communication clock |
| 45 | VOL-DATA | O | VOLUME serial communication data output |
| 46 | VOL-STB | O | VOLUME serial communication strobe |
| 47 | VOL-CLK | O | VOLUME serial communication clock |
| 48 | SW2 | I | Slide door switch2 |
| 49 | INT/PROG | O | D terminal LINE2 switching |
| 50 | REMO-CTL | O | Remote controller switching control |
| 51 - 55,60 63,66 | NC | - | Not connect |
| 56 | MT0 | O | Slide door motor control 0 |
| 57 | MT1 | O | Slide door motor control 1 |
| 58 | MTS | O | Slide door motor speed control |
| 59 | INH | I | AC switching detection |
| 61 | HP | I | Headphone input detection |
| 62 | SYS P.ON | O | System power supply control |
| 64 | DVD P.ON | O | DVD power supply control |
| 65 | TUNER P.ON | O | TUNER power supply control |
| 67 | RDS DATA | O | RDS communication data |
| 68 | RDS CLK | O | RDS communication clock |
| 69 | - | - | Not use |
| 70 | TU-DATA-OUT | I | IF-DATA and tuner receive detection |
| 71 | - | - | Not use |
| 72 | TU-DATA-IN | O | TUNER serial communication data output |
| 73 | TU CLK | O | TUNER serial communication clock |
| 74 | TU CE | O | TUNER serial communication CE |
| 75 | AM-BEAT | O | AM beat cut switching |
| 76 | S MUTE | O | System mute |
| 77 | VS1 | O | E: Scart connector control, D: S1 OUT control |
| 78 | VS3 | O | Control for scart connector control terminal |
| 79 | LED-DIM | O | Disc LED dimmer control |
| 80 | LED BLUE | O | Disc LED control |
| 81 | MECHA-V/H | O | Indicate of mechanism position to front end |
| 82 | DISC-SET | O | Indicate of read start permission to front end |
| 83 | DISC-STOP | I | Receive of eject permission from front end |
| 84 | DVD-SAFETY | I | Short detecting signal 2 |
| 85 | SW P.ON | O | Subwoofer power supply control |
| 86 - 88 | NC | - | Not use |
| 89 | SELECT2 | O | DSP signal switching (AUX) |
| 90 | SELECT1 | O | DSP signal switching (TUNER) |
| 91 | DI-RST | O | PANECON reset output |
| 92 | DI-CS | O | PANECON serial communication CS |
| 93 | - | - | Not use |
| 94 | TOPEN | O | Loading mechanism motor control 1 |
| 95 | DAVSS | - | Ground |
| 96 | TCLOSE | O | Loading mechanism motor control 2 |
| 97 | LMMUTE | O | Loading mechanism motor driver mute |
| 98 | SWOPEN | I | Loading mechanism eject switch |
| 99 | SWUPDN | I | Loading mechanism loading switch |
| 100 | DAVDD | - | Power supply |

## ■ MN102L62GLF3 (IC401) : Unit CPU

1. Terminal layout



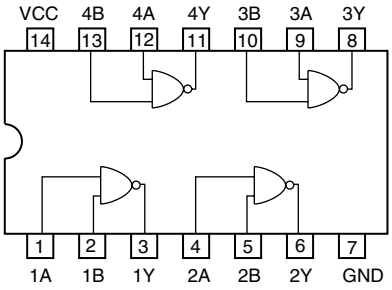

2. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | WAIT | I | Micro computer wait signal input |
| 2 | RE | O | Read enable |
| 3 | /SPMUTE | O | Spindle muting output to IC251 |
| 4 | WEN | O | Write enable |
| 5 | - | - | Not connect |
| 6 | CS1 | O | Chip select for ODC |
| 7 | CS2 | - | Chip select for ZIVA (Not connect) |
| 8 | HDTYPE | O | HD TYPE selection |
| 9 | /DRVMUTE | O | Driver mute |
| 10 | SBRK | O | SP motor brake control |
| 11 | LSIRST | O | LSI reset |
| 12 | WOR0 | O | Bus selection input |
| 13 - 16 | A0 - A3 | O | Address bus (0 - 3) for CPU |
| 17 | VDD | - | Power supply |
| 18 | SYSCLK | - | System clock signal output (Not connect) |
| 19 | VSS | - | Ground |
| 20 | XI | - | Not use (Connect to VSS) |
| 21 | XO | - | Not connect |
| 22 | VDD | - | Power supply |
| 23 | OSCI | I | Clock signal input (13.5MHz) |
| 24 | OSCO | O | Clock signal output (13.5MHz) |
| 25 | MODE | I | CPU mode selection input |
| 26 - 33 | A4 - A11 | O | Address bus (4 - 11) for CPU |
| 34 | VDD | - | Power supply |
| 35 - 40 | A12 - A17 | O | Address bus (12 - 17) for CPU |
| 41 | A18 | - | Address bus 18 for CPU (Not connect) |
| 42 | A19 | - | Address bus 19 for CPU (Not connect) |
| 43 | VSS | - | Ground |
| 44 | A20 | - | Address bus 20 for CPU ( Not connect) |
| 45 | DISCSTP | O | DISC STOP control |
| 46 | HAGUP | O | H/A gain control |
| 47 | - | - | Not connect |
| 48 | - | - | Not connect |
| 49 | /HFMON | I | HF monitor |
| 50 | TRVSW | I | Detection switch of traverse inside |
| 51 | SWUPDN | - | Not connect |
| 52 | MECHA_H/V | I | Disc detection |
| 53 | DISCSET | O | Serial enable signal for ADSC |
| 54 | VDD | - | Power supply |
| 55 | FEPEN | O | Serial enable signal for FEP |
| 56 | SLEEP | O | Standby signal for FEP |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 57 | - | - | Not connect |
| 58 | REQ | O | Communication request |
| 59 | - | - | Connect to TP405 (REQ) |
| 60 | - | - | Not connect |
| 61 | VSS | - | Ground |
| 62 | EPCS | O | EEPROM chip select |
| 63 | EPSK | O | EEPROM clock |
| 64 | EPDI | I | EEPROM data input |
| 65 | EPDO | O | EEPROM data output |
| 66 | VDD | - | Power supply |
| 67 | SCLKO | I | Communication clock |
| 68 | S2UTD | I | Communication input data |
| 69 | U2SDT | O | Communication output data |
| 70 | CPSCK | O | Clock for ADSC serial |
| 71 | P74/SBI1 | - | Connect to VSS |
| 72 | SDOUT | O | ADSC serial data output |
| 73 | - | - | Not use (Connect to ground) |
| 74 | - | - | Not use (Connect to ground) |
| 75 | NMI | - | Not use (Connect to ground) |
| 76 | ADSCIRQ | I | Interrupt input of ADSC |
| 77 | ODCIRQ | I | Interrupt input of ODC |
| 78 | DECIRQ | I | Interrupt input of ZIVA |
| 79 | CSSIRQ | I | Interrupt input of SODC |
| 80 | ODCIRQ2 | I | Interruption of system control |
| 81 | ADSEP | I | Address data selection input |
| 82 | RST | I | Reset input |
| 83 | VDD | - | Power supply |
| 84 - 91 | TEST1 - TEST 8 | I | Test signal (1 - 8) input |
| 92 | VSS | - | Ground |
| 93 - 100 | D0 - 7 | I/O | Data bus (0 - 7) of CPU |

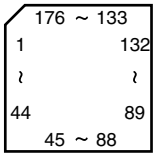
## ■ TC74HC00AF (IC408) : Quad 2 input NAND gate

1. Terminal layout & Block diagram



## ■ MN103S26EGA (IC301) : Optical disc controller

1.Terminal layout




2. Pin function

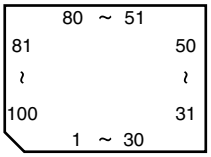
| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | NINT0 | O | System control interruption 0 |
| 2 | NINT1 | O | System control interruption 1 |
| 3 | VDD3 | - | Power supply (3.3V) |
| 4 | VSS | - | Ground |
| 5 | NINT2 | O | System control interruption 2 |
| 6 | WAITODC | O | System control wait control |
| 7 | NMRST | - | System control reset (Not connect) |
| 8 | DASPST | - | DASP signal initializing |
| 9 - 17 | CPUADR17 - 9 | I | System control address |
| 18 | VDD18 | - | Power supply (1.8V) |
| 19 | VSS | - | Ground |
| 20 | DRAMVDD18 | - | Connect to VDD18 |
| 21 | DRAMVSS | - | Connect to VSS |
| 22 - 30 | CPUADR8 - 0 | I | System control address |
| 31 | VDD3 | - | Power supply (3.3V) |
| 32 | VSS | - | Ground |
| 33 | DRAMVDD3 | - | Connect to VDD3 |
| 34 | NCS | I | System control chip select |
| 35 | NWR | I | System control write |
| 36 | NRD | I | System control read |
| 37 - 44 | CPUDT7 - 0 | I/O | System control data |
| 45 | CLKOUT1 | - | Not connect |
| 46 | MMOD | I | Connect to VSS |
| 47 | NRST | I | System reset |
| 48 | MSTPOL | I | Master terminal polarity switch input |
| 49 | SCLOCK | - | Not connect |
| 50 | SDATA | - | Not connect |
| 51 | OFTR | I | Off track signal input |
| 52 | BDO | I | RF dropout/BCA data of making to binary |
| 53 - 56 | PWM1 - 4 | - | Not connect |
| 57 | VDD3 | - | Power supply (3.3V) |
| 58 | DRAMVDD18 | - | Connect to VDD18 |
| 59 | DRAMVSS | - | Connect to VSS |
| 60 | VSS | - | Ground |
| 61 - 64 | PWM5 - 8 | - | Not connect |
| 65 | TBAL | O | Tracking balance adjustment output |
| 66 | FBAL | O | Focus balance adjustment output |
| 67 | TRSDRV | O | Traverse drive output |
| 68 | SPDRV | O | Spindle drive output |
| 69 | FG | I | Motor FG input |
| 70 | TILTP | - | Not connect |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 71 | TILT | - | Not connect |
| 72 | TILTN | - | Not connect |
| 73 | TX | - | Not connect |
| 74 | DTRD | - | Not connect |
| 75 | IDGT | - | Not connect |
| 76 | VDD18 | - | Power supply (1.8V) |
| 77 | VSS | - | Ground |
| 78 | VDD3 | - | Power supply (1.8V) |
| 79 | OSCI1 | I | 16.9MHz clock input |
| 80 | OSCO1 | - | Not connect |
| 81 | VSS | - | Ground |
| 82 | TSTSG | O | Calibration signal |
| 83 | VFOSHORT | O | VFO short output |
| 84 | JLINE | O | J-line setting output |
| 85 | AVSS | - | Analog ground |
| 86 | ROUT | - | Not connect |
| 87 | LOUT | - | Not connect |
| 88 | AVDD | - | Analog power supply |
| 89 | VCOF | I | JFVCO control voltage |
| 90 | TRCRS | I | Input signal for track cross formation |
| 91 | CMPIN | - | Not connect |
| 92 | LPFOUT | - | Not connect |
| 93 | LPFIN | I | Pull-up to VHALF |
| 94 | AVSS | - | Analog ground |
| 95 | HPFOUT | - | Not connect |
| 96 | HPFIN | I | HPF input |
| 97 | CSLFLT | I | Pull-up to VHALF |
| 98 | RFOIF | - | Not connect |
| 99 | AVDD | - | Analog power supply |
| 100 | PLFLT2 | I | Connect to capacitor 2 for PLL |
| 101 | PLFLT1 | I | Connect to capacitor 1 for PLL |
| 102 | AVSS | - | Analog ground |
| 103 | RVI | I | Connect to resistor for VREF reference current source |
| 104 | VREFH | I | Reference voltage input (2.2V) |
| 105 | PLPG | - | Not connect |
| 106 | VHALF | I | Reference voltage input (1.65V) |
| 107 | DSLF2 | I | Connect to capacitor 2 for DSL |
| 108 | DSLF1 | I | Connect to capacitor 1 for DSL |
| 109 | AVDD | - | Analog power supply |
| 110 | NARF | I | Equivalence RF- |
| 111 | ARF | I | Equivalence RF+ |
| 112 | JITOUT | O | Output for jitter signal monitor |
| 113 | AVSS | - | Analog ground |
| 114 | DAC0 | O | Tracking drive output |
| 115 | DAC1 | O | Focus drive output |
| 116 | AVDD | - | Analog power supply |
| 117 | AD0 | I | Focus error input |
| 118 | AD1 | I | Phase difference/3 beams tracking error |
| 119 | AD2 | I | AS: Full adder signal |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 120 | AD3 | I | RF envelope input |
| 121 | AD4 | I | DVD laser current control terminal |
| 122 | AD5 | I | Tracking drive IC input offset |
| 123 | AD6 | I | CD laser current control terminal |
| 124 | TECAPA | - | Not connect |
| 125 | VDD3 | - | Power supply (3.3V) |
| 126 | VSS | - | Ground |
| 127 - 130 | MONI0 - 3 | O | Internal goods title monitor (Connect to TP306 - TP309) |
| 131 | NEJECT | I | Eject detection |
| 132 | NTRYCTL | I | Tray close detection |
| 133 | NDASP | I/O | ATAPI drive active / Slave connection I/O |
| 134 | NCS3FX | I | ATAPI host chip select |
| 135 | NCS1FX | I | ATAPI host chip select |
| 136 | DA2 | I/O | ATAPI host address |
| 137 | DA0 | I/O | ATAPI host address |
| 138 | NPDIAG | I/O | ATAPI slave master diagnosis input |
| 139 | DA1 | I/O | ATAPI host address |
| 140 | NIOCS16 | - | ATAPI output of selection of host data bus width (Not connect) |
| 141 | INTRQ | O | ATAPI host interruption output |
| 142 | NDMACK | I | ATAPI host DMA response |
| 143 | VDD3 | - | Power supply (3.3V) |
| 144 | VSS | - | Ground |
| 145 | IORDI | - | ATAPI host ready output (Not connect) |
| 146 | NIORD | I | ATAPI host read |
| 147 | NIOWR | I/O | ATAPI host write |
| 148 | DMARQ | - | ATAPI host DMA request (Not connect) |
| 149 - 151 | HDD15,HDD0,HDD14 | I/O | ATAPI host data 15,0,14 |
| 152 | VDD18 | - | Power supply (1.8V) |
| 153 | PO | - | Connect to ground |
| 154 | UATASEL | I | Connect to VSS |
| 155 | VSS | - | Ground |
| 156 | VDD3 | - | Power supply (3.3V) |
| 157 | HDD1,HDD13,HDD2 | I/O | ATAPI data 1,13,2 |
| 160,161 | HDD12,HDD3 | I/O | ATAPI data 12,3 |
| 162 | VDD3 | - | Power supply (3.3V) |
| 163 | VSS | - | Ground |
| 164 - 166 | HDD11,HDD4,HDD10 | I/O | ATAPI data 11,4,10 |
| 167,168 | HDD5,HDD9 | I/O | ATAPI data 5,9 |
| 169 | VDD3 | - | Power supply (3.3V) |
| 170 | VSS | - | Ground |
| 171 | HDD6,HDD8,HDD7 | I/O | ATAPI data 6,8,7 |
| 174 | VDDH | - | Reference power supply for ATAPI (5.0V) |
| 175 | NRESET | I | ATAPI host reset |
| 176 | MASTER | I/O | ATAPI master / Slave selection |

## ■ TC9446F-025 (IC403) : DSP

1.Terminal layout




2. Pin function

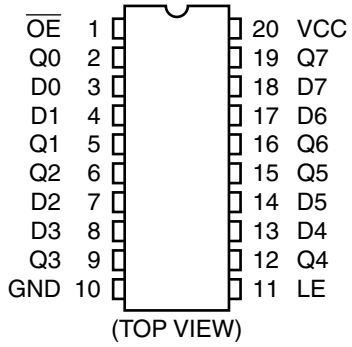
| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | $\overline{\text{RST}}$ | I | Reset signal input terminal (L: reset, H: normal operation) |
| 2 | MIMD | I | Mode select input for MCU interface (L: serial, H: IIC bus) |
| 3 | $\overline{\text{MICS}}$ | I | Chip select input for MCU interface |
| 4 | $\overline{\text{MILP}}$ | I | Latch pulse input for MCU interface |
| 5 | MIDIO | I/O | Data input and output for MCU interface |
| 6 | $\overline{\text{MICK}}$ | I | Clock input for MCU interface |
| 7 | MIACK | O | Acknowledge output for MCU interface |
| 8 | FI0 | I | Flag input 0 |
| 9 | FI1 | I | Flag input 1 |
| 10 | FI2 | I | Flag input 2 |
| 11 | FI3 | I | Flag input 3 |
| 12 | IRQ | I | Interruption input |
| 13 | VSS | - | Digital ground |
| 14 | LRCKA | I | LR clock input-A for audio interface |
| 15 | BCKA | I | Bit clock input-A for audio interface |
| 16 | SDO0 | O | Data output-0 for audio interface |
| 17 | SDO1 | O | Data output-1 for audio interface |
| 18 | SDO2 | O | Data output-2 for audio interface |
| 19 | SDO3 | O | Data output-3 for audio interface (Not connect) |
| 20 | LRCKB | I | LR clock input-B for audio interface |
| 21 | BCKB | I | Bit clock input-B for audio interface |
| 22 | SDI0 | I | Data input-0 for audio interface |
| 23 | SDI1 | I | Data input-1 for audio interface |
| 24 | VDD | - | Digital power supply |
| 25 | LRCKOA | O | LR clock output-A for audio interface |
| 26 | BCKOA | O | Bit clock output-A for audio interface |
| 27 | $\overline{\text{TEST0}}$ | I | Test input-0 (L: test, H: normal operation) |
| 28 | $\overline{\text{TEST1}}$ | I | Test input-1 (L: test, H: normal operation) |
| 29 | LRCKOB | O | LR clock output-B for audio interface (Not connect) |
| 30 | BCKOB | O | Bit clock output-B for audio interface (Not connect) |
| 31 | TXO | O | SPDIF output |
| 32 | $\overline{\text{TEST2}}$ | I | Test input-2 (L: test, H: normal operation) |
| 33 | $\overline{\text{TEST2}}$ | I | Test input-3 (L: test, H: normal operation) |
| 34 | RX | I | SPDIF input |
| 35 | VSS | - | Digital ground |
| 36 | $\overline{\text{TSTSUB0}}$ | I | Test sub input-0 (L: test, H: normal operation) |
| 37 | FCONT | O | Frequency control output for VCO circuit |
| 38 | $\overline{\text{TSTSUB1}}$ | I | Test sub input-1 (L: test, H: normal operation) |
| 39 | $\overline{\text{TSTSUB2}}$ | I | Test sub input-2 (L: test, H: normal operation) |
| 40 | PDO | O | Phase detect signal output |
| 41 | VDDA | - | Analog power supply |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 42 | PLON | I | Clock selection input (L: external clock, H: VCO clock) |
| 43 | AMPI | I | Amplifier input for low pass filter |
| 44 | AMPO | O | Amplifier output for low pass filter |
| 45 | CKI | I | External clock input |
| 46 | VSSA | - | Analog ground |
| 47 | CKO | O | DIR clock output |
| 48 | LOCK | O | VCO lock output |
| 49 | VSS | - | Digital ground |
| 50 | $\overline{WR}$ | O | Write signal output for external SRAM |
| 51 | $\overline{OE}$ | O | Enable signal output for external SRAM |
| 52 | $\overline{CE}$ | O | Chip enable signal output for external SRAM |
| 53 | VDD | - | Digital power supply |
| 54 | IO7 | I/O | Data I/O-7 for external SRAM |
| 55 | IO6 | I/O | Data I/O-6 for external SRAM |
| 56 | IO5 | I/O | Data I/O-5 for external SRAM |
| 57 | IO4 | I/O | Data I/O-4 for external SRAM |
| 58 | IO3 | I/O | Data I/O-3 for external SRAM |
| 59 | IO2 | I/O | Data I/O-2 for external SRAM |
| 60 | IO1 | I/O | Data I/O-1 for external SRAM |
| 61 | IO0 | I/O | Data I/O-0 for external SRAM |
| 62 | VSS | - | Digital ground |
| 63 | AD0 | O | Address output-0 for external SRAM |
| 64 | AD1 | O | Address output-1 for external SRAM |
| 65 | AD2 | O | Address output-2 for external SRAM |
| 66 | AD3 | O | Address output-3 for external SRAM |
| 67 | AD4 | O | Address output-4 for external SRAM |
| 68 | AD5 | O | Address output-5 for external SRAM |
| 69 | AD6 | O | Address output-6 for external SRAM |
| 70 | AD7 | O | Address output-7 for external SRAM |
| 71 | VDD | - | Digital power supply |
| 72 | AD8 | O | Address output-8 for external SRAM |
| 73 | AD9 | O | Address output-9 for external SRAM |
| 74 | AD10 | O | Address output-10 for external SRAM |
| 75 | AD11 | O | Address output-11 for external SRAM |
| 76 | AD12 | O | Address output-12 for external SRAM |
| 77 | AD13 | O | Address output-13 for external SRAM |
| 78 | AD14 | O | Address output-14 for external SRAM |
| 79 | AD15 | O | Address output-15 for external SRAM |
| 80 | AD16 | O | Address output-16 for external SRAM |
| 81 | VSS | - | Digital ground |
| 82 | PO0 | O | General output port-0 |
| 83 | PO1 | O | General output port-1 |
| 84 | PO2 | O | General output port-2 |
| 85 | PO3 | O | General output port-3 |
| 86 | PO4 | O | General output port-4 |
| 87 | PO5 | O | General output port-5 |
| 88 | PO6 | O | General output port-6 |
| 89 | PO7 | O | General output port-7 |
| 90 | VDDDL | - | Power supply for DLL circuit |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 91 | LPFO | O | Low pass filter output for DLL circuit |
| 92 | DLON | I | DLCKS pin / DLON pin / DLL clock setting<br>"L" / "L" / SCKI input (DLL = off)<br>"L" / "H" / 4th times of XI clock<br>"H" / "L" / 3rd times of XI clock<br>"H" / "H" / 6th times of XI clock |
| 93 | DLCKS | I | |
| 94 | SCKO | O | ASP clock output (Not connect) |
| 95 | VSSDL | - | Ground for DLL circuit |
| 96 | SCKI | I | External system clock input |
| 97 | VSSX | - | Ground for crystal oscillator |
| 98 | XO | O | Crystal oscillator output |
| 99 | XI | I | Crystal oscillator input |
| 100 | VDDX | - | Digital power supply |

## ■ 74LCX373MTC (IC512,IC513) : Octal D-type latch

1. Terminal layout




(TOP VIEW)

2. Truth table

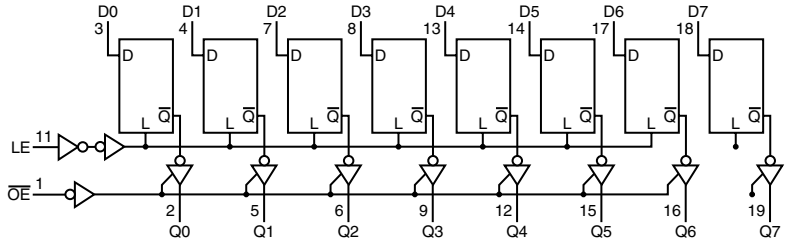
| INPUTS | | | OUTPUT |
|---|---|---|---|
| $\overline{OE}$ | LE | D | Y |
| H | X | X | Z |
| L | L | X | Qn |
| L | H | L | L |
| L | H | H | H |

X: Don't care

Z: High impedance

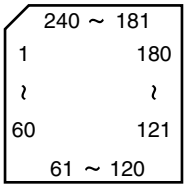
Qn: Q outputs are latched at the time when the LE input is taken to a low logic level.

3. Block diagram



## ■ NDV8601VWA-BB (IC501) : DVD on a chip processor

1.Terminal layout




2. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | Vddio | - | Power supply (3.3V) |
| 2,3 | MD10,MD11 | I/O | SDRAM data bus |
| 4 | Vdd | - | Power supply (1.8V) |
| 5 | MD12 | I/O | SDRAM data bus |
| 6 | Vssio | - | Ground |
| 7 - 9 | MD13 - MD15 | I/O | SDRAM data bus |
| 10 | Vddio | - | Power supply (3.3V) |
| 11 | DQM1 | O | SDRAM data byte enable |
| 12,13 | MA9,MA8 | O | SDRAM address bus |
| 14 | Vssio | - | Ground |
| 15,16 | MA7,MA6 | O | SDRAM address bus |
| 17 | Vss | - | Ground |
| 18 | MA5 | O | SDRAM address bus |
| 19 | Vddio | - | Power supply (3.3V) |
| 20,21 | MA4,MA3 | O | SDRAM address bus |
| 22 | MCLK | O | SDRAM clock |
| 23 | Vssio | - | Ground |
| 24 | CKE | O | SDRAM clock enable |
| 25,26 | MA2,MA1 | O | SDRAM address bus |
| 27 | Vddio | - | Power supply (3.3V) |
| 28,29 | MA0,MA10 | O | SDRAM address bus |
| 30 | MA11 | - | Not connect (SDRAM address bus) |
| 31 | Vssio | - | Ground |
| 32,33 | MA12,MA13 | O | SDRAM address bus, reserved for pin compatibility with 63-Mb SDRAM |
| 34 | Vdd | - | Power supply (1.8V) |
| 35 | CS0- | O | SDRAM primary bank chip select |
| 36 | Vddio | - | Power supply (3.3V) |
| 37 | RAS- | O | SDRAM command bit |
| 38 | CAS- | O | SDRAM command bit |
| 39 | WE- | O | SDRAM command bit |
| 40 | Vssio | - | Ground |
| 41 | DQM0 | O | SDRAM data byte enable |
| 42 | DQM2 | O | SDRAM data byte enable |
| 43 | MD16 | I/O | SDRAM data bus |
| 44 | Vddio | - | Power supply (3.3V) |
| 45,46 | MD17,MD18 | I/O | SDRAM data bus |
| 47 | Vss | - | Ground |
| 48 | MD19 | I/O | SDRAM data bus |
| 49 | Vssio | - | Ground |
| 50 - 52 | MD20 - MD22 | I/O | SDRAM data bus |
| 53 | Vddio | - | Power supply (3.3V) |

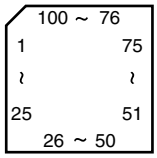
| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 54 - 56 | MD23 - MD25 | I/O | SDRAM data bus |
| 57 | Vssio | - | Ground |
| 58 - 61 | MD26 - MD29 | I/O | SDRAM data bus |
| 62 | Vddio | - | Power supply (3.3V) |
| 63,64 | MD30,MD31 | I/O | SDRAM data bus |
| 65 | DQM3 | O | SDRAM data byte enable |
| 66 | CS1- | - | Not connect (SDRAM extension bank chip select) |
| 67 | Vsso | - | Ground |
| 68 | SPDIF | O | S/PDIF digital audio output |
| 69 | Vssio | - | Ground |
| 70 | AIN | I | Digital audio input for digital micro; can be used as GPIO |
| 71 | AOUT3 | O | Serial audio output data to audio DAC for left and right channels for down-mixed stereo; can be used as GPIO |
| 72 | AOUT2 | O | Serial audio output data to audio DAC for surround left and right channels; can be used as GPIO |
| 73 | AOUT1 | O | Serial audio output data to audio DAC for center and LFE channels; can be used as GPIO |
| 74 | AOUT0 | O | Serial audio output data to audio DAC for left and right channels; can be used as GPIO |
| 75 | Vddio | - | Power supply (3.3V) |
| 76 | PCMCLK | - | Not connect (Audio DAC PCM sampling clock frequency, common clock for DACs and ADC; can be used as GPIO) |
| 77 | Vdd | - | Power supply (1.8V) |
| 78 | ACLK | O | Audio interface serial data clock, common clock for DACs and analog-to digital converter (ADC) |
| 79 | LRCLK | O | Left/Right channel clock, common clock for DACs and ADC |
| 80 | SRST | O | Active low RESET signal for peripheral reset |
| 81 | RSTP | I | RESET_Power from system, used to reset frequency synthesizer and rest of chip |
| 82 | Vssio | - | Ground |
| 83 | RXD1 | I | UART1 serial data input from external serial device, used for IR receive; can be used as GPIO |
| 84 | SSPIN1 | I/O | SSP1 data in or 16X clock for USART function in UART1; can be used as GPIO |
| 85 | Vss | - | Ground |
| 86 | SSPOUT1 | I/O | SSP1 data out or UART1 data-terminal-ready signal; can be used as GPIO |
| 87 | SSPCLK1 | I/O | SSP1 clock or UART1 clear-to-send signal; can be used as GPIO |
| 88 | SSPCLK0 | I/O | SSP0 clock or request-to-send function in UART1; can be used as GPIO |
| 89 | Vdd | - | Power supply (1.8V) |
| 90 | SSPIN0 | I/O | SSP0 data in or 16X clock for USART function in UART0; can be used as GPIO |
| 91 | Vddio | - | Power supply (3.3V) |
| 92 | SSPOUT0 | I/O | SSP0 data out or UART0 data-terminal-ready signal; can be used as GPIO |
| 93 | TXD0 | I/O | UART0 serial data output to an external serial device; can be used as GPIO |
| 94 | RXD0 | I | UART0 serial data input from external serial device; can be used as GPIO |
| 95 | CTS0- | I/O | UART0 clear-to-send signal; can be used as GPIO |
| 96 | RTS0- | I/O | UART0 request-to-send signal; can be used as GPIO |
| 97 | Vssio | - | Ground |
| 98 | CXI | I | Crystal input pin for on-chip oscillator or system input clock |
| 99 | CXO | - | Not connect (Crystal output pin for on-chip oscillator) |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 100 | OSCVss | - | Oscillator ground |
| 101 | OSCVdd | - | Oscillator power supply (1.8V) |
| 102 | MVCKVdd | - | Main and video clock PLL power supply (3.3V) |
| 103 | SCEN | I | Scan chain test enable |
| 104 | MVCKVss | - | Main and video clock PLL ground |
| 105 | ACLKVss | - | Audio clock PLL ground |
| 106 | SCMD | I | Scan chain test mode |
| 107 | ACLKVdd | - | Audio clock PLL power supply (3.3V) |
| 108 | Vdddak | - | DAC digital power supply (1.8V) |
| 109 | Vssdac | - | DAC digital ground |
| 110 | Cr/R | O | Video DAC3 output (A second composite video; Cr output for composite, Cr output for component, Red output for SCART |
| 111 | IOM | O | Cascaded DAC differential output used to dump current into external resistor for power |
| 112 | C/Cb/B | O | Video DAC2 output (Chrominance output for NTSC/PAL S-Video; Cb output for component, Blue output for SCART |
| 113 | Vaa3 | - | DAC analog power supply (3.3V) |
| 114 | Y/G | O | Video DAC1 output (Luminance for S-Video and component, G output for SCART) |
| 115 | Vssa | - | DAC analog ground |
| 116 | VREF | - | Not connect (Input voltage reference (1.2V typical) for output DACs) |
| 117 | Vaa | - | Connect to power supply (1.8V) |
| 118 | CVBS/C | O | Video DAC output (Composite video; Chrominance output for S-Video) |
| 119 | RSET | O | Current setting resistor of output DACs |
| 120 | COMP | O | Compensation capacitor connection |
| 121 | Vss | - | Ground |
| 122 | VCLK | - | Not connect (VCLK input/output for video I/O port function |
| 123 | VSYNC | - | Not connect (Bi-directional HSYNC signal for devices that do not use end active video/start active video (EAV/SAV) codes; can be used as GPIO) |
| 124 | HSYNC | - | Not connect (Bi-directional VSYNC signal for devices that do not use end active video/start active video (EAV/SAV) codes; can be used as GPIO) |
| 125 | Vddio | - | Power supply (3.3V) |
| 126 - 131 | VIO7 - VIO2 | - | Not connect (Bi-directional digital video port data bus; can be used as GPIO) |
| 132 | Vssio | - | Ground |
| 133,134 | VIO1,VIO0 | - | Not connect (Bi-directional digital video port data bus; can be used as GPIO) |
| 135 | Vdd | - | Power supply (1.8V) |
| 136 - 139 | AD31 - AD28 | I/O | $\mu$P multiplexed address/data bus |
| 140 | Vddio | - | Power supply (3.3V) |
| 141 - 144 | AD27 - AD24 | I/O | $\mu$P multiplexed address/data bus |
| 145 | PWE3- | I/O | Byte write enable for FLASH, EEPROM, SRAM or peripherals |
| 146 | AD23 | I/O | $\mu$P multiplexed address/data bus |
| 147 | Vssio | - | Ground |
| 148 - 153 | AD22 - AD17 | I/O | $\mu$P multiplexed address/data bus |
| 154 | Vddio | - | Power supply (3.3V) |
| 155 | AD16 | I/O | $\mu$P multiplexed address/data bus |
| 156 | PWE2- | I/O | Byte write enable for FLASH, EEPROM,SRAM or peripherals |
| 157,158 | AD15,AD14 | I/O | $\mu$P multiplexed address/data bus |
| 159 | Vdd | - | Power supply (1.8V) |
| 160 | SCLK | O | External bus clock used for programmable host bus peripherals |
| 161 | ACK | I/O | Programmable WAIT-/ACK-/RDY- control |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 162 | Vssio | - | Ground |
| 163 - 168 | AD13 - AD8 | I/O | $\mu$P multiplexed address/data bus |
| 169 | Vddio | - | Power supply (3.3V) |
| 170 | PWE1- | I/O | Byte write enable for FLASH, EEPROM,SRAM or peripherals |
| 171 | Vss | - | Ground |
| 172 - 176 | AD7 - AD3 | I/O | $\mu$P multiplexed address/data bus |
| 177 | Vssio | - | Ground |
| 178 - 180 | AD2 - AD0 | I/O | $\mu$P multiplexed address/data bus |
| 181 | Vddio | - | Power supply (3.3V) |
| 182 | PWE0- | I/O | Byte write enable for FLASH, EEPROM,SRAM or peripherals |
| 183 | ALE | I/O | Address latch enable |
| 184 - 187 | LA0 - LA3 | I/O | Latched address [3:0] |
| 188 | Vssio | - | Ground |
| 189 | RD- | I/O | Read |
| 190 | LHLDA | O | Bus hold acknowledge in slave mode |
| 191 | LHLD | I | Bus hold request from external master in slave mode |
| 192 | Vdd | - | Power supply (1.8V) |
| 193 | PCS0 | O | Peripheral chip select 0, generally used for enabling the program store ROM/FLASH |
| 194,195<br>197 - 200<br>202,203<br>205 - 209<br>211 | XIO1,XIO2<br>XIO3 - XIO6<br>XIO7,XIO8<br>XIO9 - XIO13<br>XIO14 | I/O | Programmable general purpose external input/output (XIO) also used as peripheral chip select, interrupt, Pulse Width Modulator (PWM) output and other system signals |
| 196 | Vddio | - | Power supply (3.3V) |
| 201 | Vss | - | Ground |
| 204 | Vssio | - | Ground |
| 210 | Vddio | - | Power supply (3.3V) |
| 212 | Vdd | - | Power supply (1.8V) |
| 213 | DSYNC | I | DVD parallel mode Sector Sync |
| 214 | DREQ | O | DVD parallel mode Data Request |
| 215 | DCLK | I | Data sampling clock |
| 216 | DSTB | I | Parallel mode Data Valid, serial mode left/right clock |
| 217 | DVD0 | I | DVD drive parallel data port |
| 218 | Vssio | - | Ground |
| 219 - 223 | DVD1 - DVD5 | I | DVD drive parallel data port |
| 224 | Vddio | - | Power supply (3.3V) |
| 225,226 | DVD6,DVD7 | I | DVD drive parallel data port |
| 227 | MD0 | I/O | SDRAM data bus |
| 228 | Vssio | - | Ground |
| 229 | MD1 | I/O | SDRAM data bus |
| 230 | Vss | - | Ground |
| 231,232 | MD2,MD3 | I/O | SDRAM data bus |
| 233 | Vddio | - | Power supply (3.3V) |
| 234 - 236 | MD4 - MD6 | I/O | SDRAM data bus |
| 237 | Vssio | - | Ground |
| 238 - 240 | MD7 - MD9 | I/O | SDRAM data bus |

## ■ UPD784215AGC167 (IC406) : DSP micom

1. Terminal layout



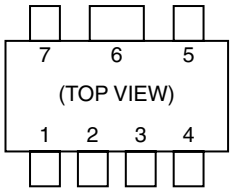

2. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 - 8 | - | - | Not connect |
| 9 | VDD | - | Power supply |
| 10 | X2 | O | OSC connect pin |
| 11 | X1 | I | OSC connect pin |
| 12 | VSS | - | Ground |
| 13 | XT2 | - | Not connect |
| 14 | XT1 | - | Not connect |
| 15 | $\overline{\text{RESET}}$ | I | Reset input |
| 16 | $\overline{\text{AUTODATA}}$ | O | Data request signal |
| 17 | LOCK | I | VCO lock input |
| 18 | DIGITAL0 | I | Digital data input |
| 19 | DSP FORMAT | I | DSP format status signal |
| 20 | DSP CHANNEL | I | DSP channel status signal |
| 21 | PARITY_ERR | I | Data error output signal |
| 22 | $\overline{\text{RESET IN}}$ | I | Reset signal input |
| 23 | AVDD | - | Analog power supply |
| 24 | AV REF0 | - | Connect to ground |
| 25 | - | - | Connect to ground |
| 26 | FILTER SELECT | I | Filter selection |
| 27 - 32 | - | - | Connect to ground |
| 33 | AVSS | - | Ground |
| 34,35 | - | - | Not connect |
| 36 | - | - | Connect to VDD |
| 37 | Rx | I | Digital signal input |
| 38 | Tx | O | Digital signal output |
| 39 | - | - | Not connect |
| 40 | I | O | DSP control signal |
| 41 | $\overline{\text{O}}$ | O | DSP status signal |
| 42 | $\overline{\text{DSP\_CLK}}$ | O | DSP clock control |
| 43 | DSP_RDY | O | DSP ready signal |
| 44 | - | - | Not connect |
| 45 | MIDIO_IN | I | Data input for MCU interface |
| 46 | MIDIO_OUT | O | Data output for MCU interface |
| 47 | $\overline{\text{MICK}}$ | O | Clock output for MCU interface |
| 48 | $\overline{\text{MICS}}$ | O | Chip select output for MCU interface |
| 49 | $\overline{\text{MILP}}$ | O | Latch pulse output for MCU interface |
| 50 | $\overline{\text{MIACK}}$ | I | Acknowledge input for MCU interface |
| 51,52 | - | - | Not connect |
| 53 | $\overline{\text{DSP\_RST}}$ | O | DSP reset signal |
| 54 - 63 | - | - | Not connect |

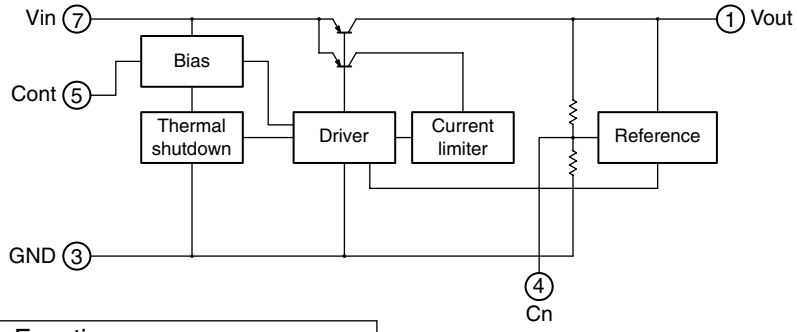
| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 64 | CODEC_D-OUT | O | CO decoder digital data output |
| 65 | CODEC_D-IN | I | CO decoder digital data input (Not connect) |
| 66 | $\overline{\text{CODEC\_CLK}}$ | O | CO decoder clock signal |
| 67 | $\overline{\text{CODEC\_CS}}$ | O | CO decoder chip select signal |
| 68 | CODEC_XTS | - | Not connect |
| 69,70 | - | - | Not connect |
| 71 | $\overline{\text{PD}}$ | O | Power down and Reset in |
| 72 | GND | - | Ground |
| 73 - 80 | - | - | Not connect |
| 81 | VDD | - | Power supply |
| 82 | $\overline{\text{3D-ON}}$ | - | Not connect |
| 83 | 3D-ON | - | Not connect |
| 84 | ANA/T.TONE | O | Analog test tone output |
| 85 | LFE.MIX | - | Not connect |
| 86 | - | - | Not connect |
| 87 | D-OUT_MUTE | O | Digital out mute output |
| 88 | $\overline{\text{S.MUTE}}$ | O | System mute output |
| 89 | - | - | Not connect |
| 90 | ASW1 | O | Optical/Coaxial switching |
| 91 | ASW2 | O | Optical/Coaxial switching |
| 92 | ASW3 | - | Not connect |
| 93 | ASW4 | - | Not connect |
| 94 | TEST | I | Test pin |
| 95 - 100 | - | - | Not connect |

## ■ MM1563DF (IC407) : Regulator

1. Terminal layout




2. Block diagram

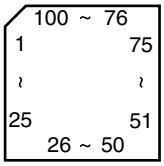



3. Pin function

| Pin No. | Symbol | Function |
|---|---|---|
| 1 | Vout | Output pin |
| 2 | NC | Not connect |
| 3 | GND | Ground |
| 4 | Cn | Noise decrease pin |
| 5 | Cont | Control pin<br>CONT: H → Output: ON<br>CONT: L → Output: OFF |
| 6 | Sub | Substrate pin, The 6pin must be connected to GND. |
| 7 | Vin | Input pin |

## ■ MN101C35DKB (IC701) : FL driver microcomputer

1. Terminal layout

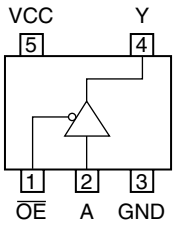



2. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | NC | - | Not connect |
| 2 | DATAIN | I | FL driver communication data input/output |
| 3 | CLOCK | I | FL driver communication clock input |
| 4 | NC | - | Not connect |
| 5 | INITIAL | I | FL driver communication CS(INITIAL) |
| 6,7 | NC | - | Not connect |
| 8 | B5V | - | VDD(B5V) |
| 9 | OSC2 | O | 8MHz main clock output |
| 10 | OSC1 | I | 8MHz main clock input |
| 11,12 | GND | - | Ground |
| 13 | NC | - | Not connect |
| 14 - 23 | GND | - | Ground |
| 24 | VREF+ | - | Reference voltage |
| 25 | NC | - | Not connect |
| 26 | RESET | I | FL reset input |
| 27 | PLED-HO | O | POWER LED switching signal |
| 28 | KEYLED-HO | O | KEY LED switching signal |
| 29 | PLED.VE | O | POWER LED switching signal |
| 30 | KEYLED_VE | O | KEY LED switching signal |
| 31 | REMOCON_HO | O | Remote control receiver switching signal |
| 32 | NC | - | Not connect |
| 33 - 38 | GND | - | Ground |
| 39 | PLED_DIM | O | POWER LED DIMMER switching signal |
| 40 | LED_DIM | O | KEY LED DIMMER switching signal |
| 41 - 46 | NC | - | Not connect |
| 47 | G1 | O | Grid signal outputs |
| 48 - 59 | G2 - G13 | O | Grid signal outputs |
| 60 | G14 | O | Grid signal outputs |
| 61 | Q15 | - | Not connect |
| 62 - 64 | - | - | Not connect |
| 65 - 99 | S1 - S35 | O | Segment signal outputs |
| 100 | -VPP | - | VPP |

## ■ NC7SZ125P5 (IC523) : Bus buffer gate with 3-state output

1. Terminal layout & Block diagram




2. Truth table

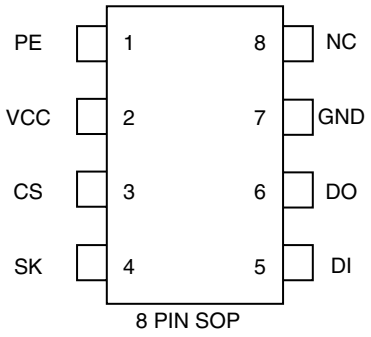
| INPUTS | | OUTPUT |
|---|---|---|
| $\overline{OE}$ | B | Y |
| L | H | H |
| L | L | L |
| H | X | Z |

X: Don't care

Z: High impedance

## ■ AK93C65AF (IC510) : EEPROM

1. Terminal layout

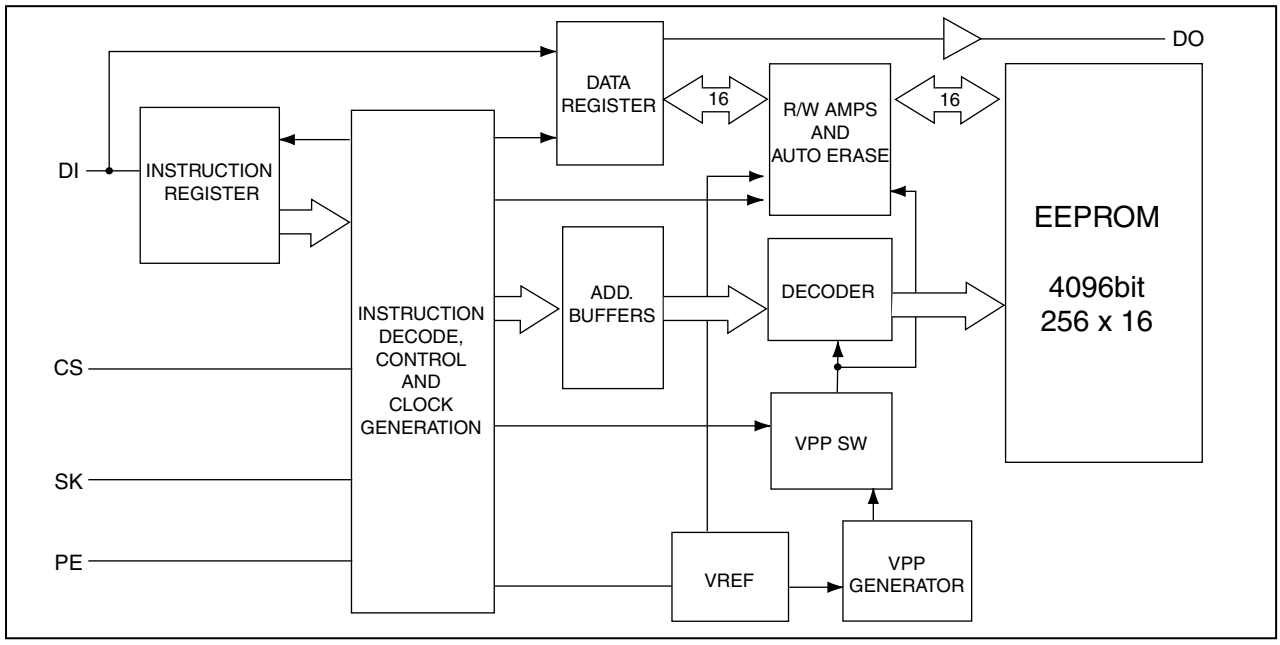



2. Pin function

| Pin No. | Symbol | Function |
|---|---|---|
| 1 | PE | Not connect,<br>Program enable (With built-in pull-up resistor) |
| 2 | VCC | Power supply |
| 3 | CS | Chip selection |
| 4 | SK | Cereal clock input |
| 5 | DI | Cereal data input |
| 6 | DO | Cereal data output |
| 7 | GND | Ground |
| 8 | NC | Not connect |

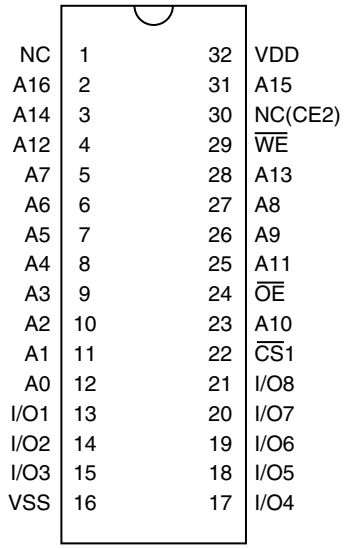
NOTE : The pull-up resistor of the PE pin is about 2.5MΩ (VCC=5V)

3. Block diagram




## ■ W24L010AJ-12/LP61L1024S-12-X (IC404) : SDRAM

1. Terminal layout

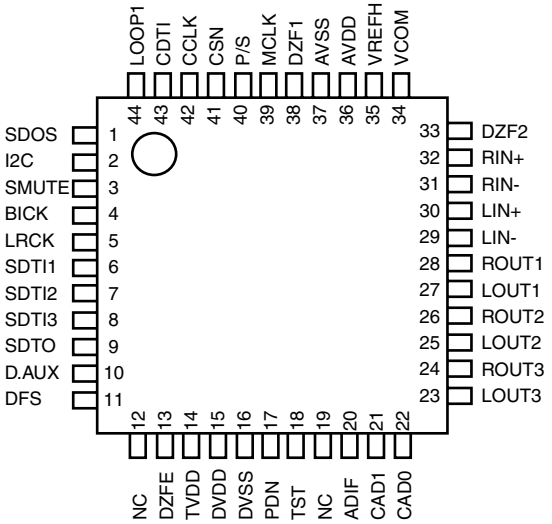



2. Pin function

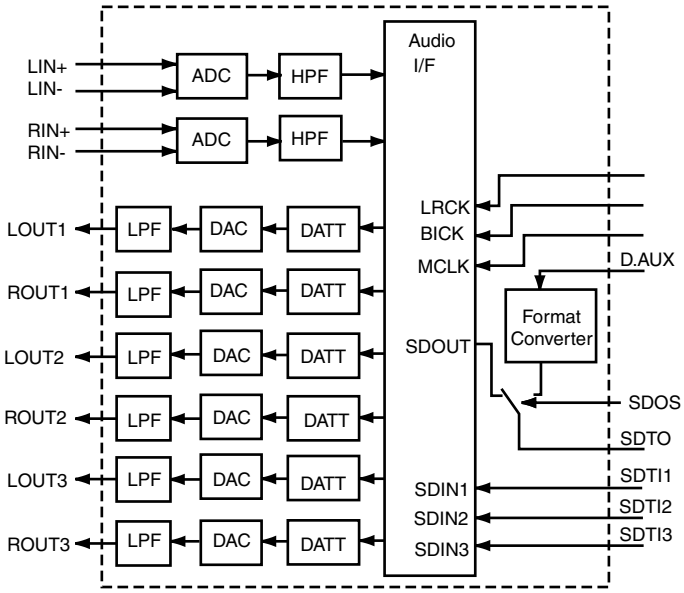
| Symbol | Function |
|---|---|
| A0~A16 | Address inputs |
| I/O1~I/O8 | Data inputs/outputs |
| $\overline{CS}$1 | Chip select inputs |
| $\overline{WE}$ | Write enable input |
| $\overline{OE}$ | Output enable input |
| VDD | Power supply |
| VSS | Ground |

## ■ AK4527BVQP (IC401) : A/D,D/A converter

1.Terminal layout




2.Block diagram




Block Diagram (DIR and AC-3) DSP are external parts)

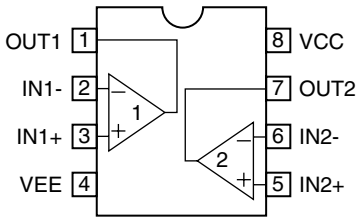
3. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | SDOS | I | SDTO Source select pin<br>"L" : Internal ADC output, "H" : DAUX input<br>ORed with serial control register if P/S="L". |
| 2 | I2C | I | MCKO Clock frequency select pin<br>"L" : MCLK, "H" : MCLK/2. ORed with serial control register if P/S= "L". |
| 3 | SMUTE | I | Connect to GND |
| 4 | BICK | I | Audio serial data clock pin |
| 5 | LRCK | I/O | Input/Output channel clock pin |
| 6 | SDTI1 | I | DAC1 Audio serial data input pin |
| 7 | SDTI2 | I | DAC2 Audio serial data input pin |
| 8 | SDTI3 | I | DAC3 Audio serial data input pin |
| 9 | SDTO | O | Audio serial data output pin |
| 10 | D.AUX | I | AUX Audio serial data input pin |
| 11 | DFS | I | Double speed sampling mode pin<br>"L" : Normal speed, "H" : Double speed, the ADC is powered down.<br>ORed with serial control register if P/S="L". |
| 12 | NC | - | De-emphasis pin (Not connect)<br>ORed with serial control register if P/S="L" |
| 13 | DZFE | I | De-emphasis Pin<br>ORed with serial control register if P/S="L" |
| 14 | TVDD | O | Master clock output pin |
| 15 | DVDD | - | Digital power supply pin |
| 16 | DVSS | - | Digital ground pin |
| 17 | PDN | I | Power-down & Reset pin<br>When "L", the AK4527 is powered-down and the control registers are reset to default state. If the state of CAD0-1 changes, then the AK4527 must be reset by PDN. |

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 18 | TST | I | X'tal oscillator Select/Test mode pin<br>"H" : X'tal Oscillator selected<br>"L" : External clock source selected |
| 19 | NC | I | Input clock select 1 pin (Not connect) |
| 20 | ADIF | I | Input clock select 0 pin |
| 21 | CAD1 | I | Chip address pin<br>Used during the serial control mode. |
| 22 | CAD0 | I | Chip address pin<br>Used during the serial control mode. |
| 23 | LOUT3 | O | Lch #3 analog output pin |
| 24 | ROUT3 | O | Rch #3 analog output pin |
| 25 | LOUT2 | O | Lch #2 analog output pin |
| 26 | ROUT2 | O | Rch #2 analog output pin |
| 27 | LOUT1 | O | Lch #2 analog output pin |
| 28 | ROUT1 | O | Rch #1 analog output pin |
| 29 | LIN- | I | Lch analog negative Input Pin |
| 30 | LIN+ | I | Lch analog positive Input Pin |
| 31 | RIN- | I | Rch analog negative Input Pin |
| 32 | RIN+ | I | Rch analog positive Input Pin |
| 33 | DZF2 | I | Negative voltage reference Input pin, AVSS |
| 34 | VCOM | O | Common voltage output pin,AVDD/2<br>Large external capacitor around 2.2uF is used to reduce power-supply noise |
| 35 | VREFH | I | Positive voltage reference input pin,AVDD |
| 36 | AVDD | - | Analog power supply pin |
| 37 | AVSS | - | Analog ground pin |
| 38 | DZF1 | I | X'tal input pin (Not connect) |
| 39 | MCLK | I | External master clock input pin if XTS="L" |
| 40 | P/S | I | Parallel/Serial select pin<br>"L" : Serial control mode, "H" : Parallel control mode |
| 41 | CSN | I | Chip select pin in serial mode |
| 42 | CCLK | I | Control data clock pin in serial mode |
| 43 | CDTI | I | Control data input pin in serial mode |
| 44 | LOOP1 | I | Loop back mode pin in parallel mode<br>Enable all 3 DAC channels to be input from SDTII. |

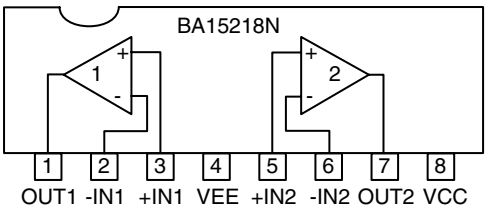
## ■ BA15218F (IC510,IC511,IC531,IC561,IC581,IC591) : Dual operational amplifier

1. Terminal layout & Block diagram



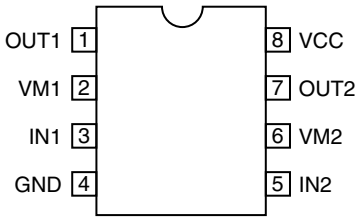

## ■ BA15218N (IC103,IC104,IC108,IC109,IC110,IC201,IC202) : Dual operational amplifier

1. Terminal layout & Block diagram

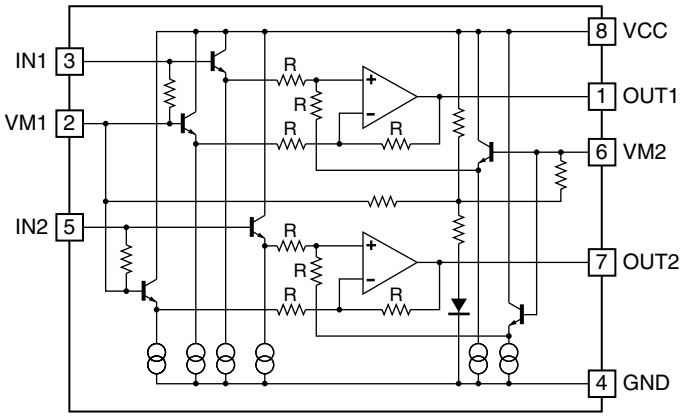



## ■ BA3121 (IC100,IC101,IC102) : Ground isolation amplifier

1. Terminal layout

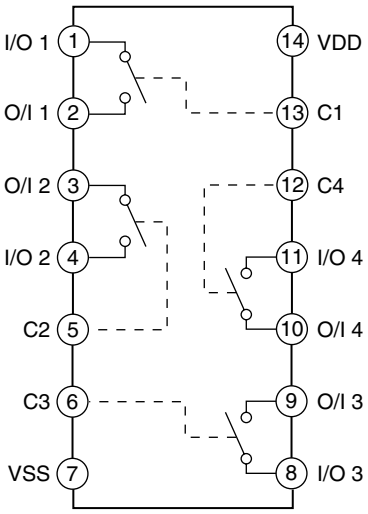



2. Block diagram



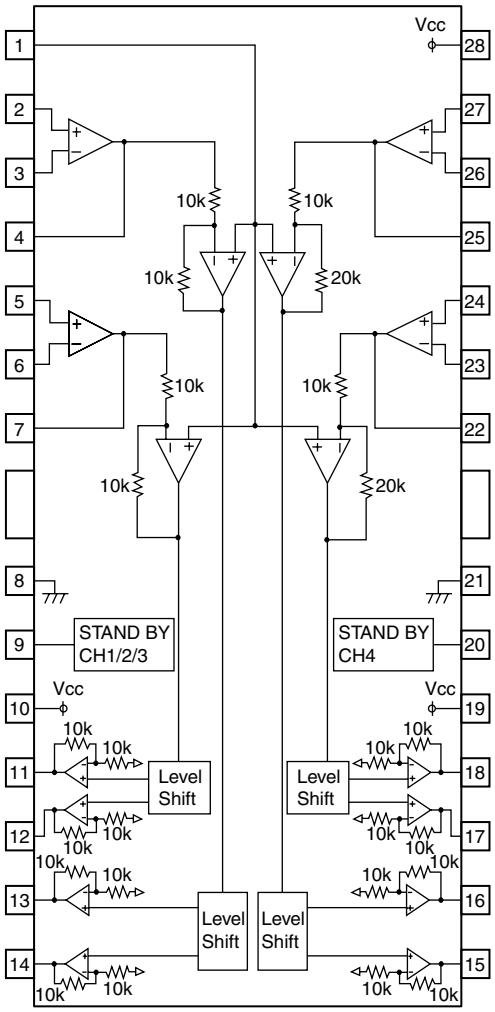

## ■ BU4066BCF (IC151) : Quad analog witch

1. Terminal layout & Block diagram



## ■ BA5983FM (IC201) : 4-channel driver

1. Terminal layout & Block diagram

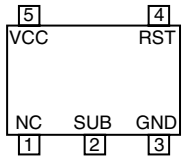



2. Pin function

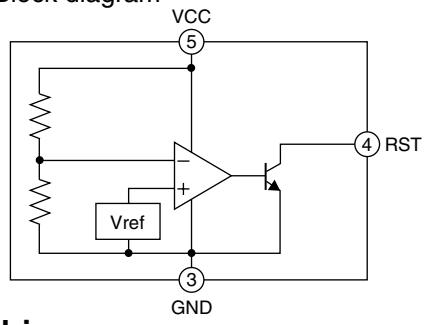
| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | BIASIN | I | Input for Bias-amplifier |
| 2 | OPIN1+ | I | Non inverting input for CH1 OP-AMP |
| 3 | OPIN1- | I | Inverting input for CH1 OP-AMP |
| 4 | OPOUT1 | O | Output for CH1 OP-AMP |
| 5 | OPIN2+ | I | Non inverting input for CH2 OP-AMP |
| 6 | OPIN2- | I | Inverting input for CH2 OP-AMP |
| 7 | OPOUT2 | O | Output for CH2 OP-AMP |
| 8 | GND | - | Substrate ground |
| 9 | STBY1 | I | Input for CH1/2/3 stand by control |
| 10 | POWVCC1 | - | Vcc for CH1/2 power block |
| 11 | VO2- | O | Inverted output of CH2 |
| 12 | VO2+ | O | Non inverted outpur of CH2 |
| 13 | VO1- | O | Inverted output of CH1 |
| 14 | VO1+ | O | Non inverted outpur of CH1 |
| 15 | VO4+ | O | Non inverted output of CH4 |
| 16 | VO4- | O | Inverted output of CH4 |
| 17 | VO3+ | O | Non inverted output of CH3 |
| 18 | VO3- | O | Inverted output of CH3 |
| 19 | POWVCC2 | - | Vcc for CH3/4 power block |
| 20 | STBY2 | I | Input for Ch4 stand by control |
| 21 | GND | - | Substrate ground |
| 22 | OPOUT3 | O | Output for CH3 OP-AMP |
| 23 | OPIN3- | I | Inverting input for CH3 OP-AMP |
| 24 | OPIN3+ | I | Non inverting input for CH3 OP-AMP |
| 25 | OPOUT4 | O | Output for CH4 OP-AMP |
| 26 | OPIN4- | I | Inverting input for CH4 OP-AMP |
| 27 | OPIN4+ | I | Non inverting input for CH4 OP-AMP |
| 28 | PREVCC | - | Vcc for pre block |

## ■ BD4740G (IC803) : Reset

1. Terminal layout

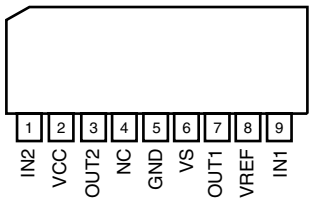



2. Block diagram




## ■ TA8409S (IC108) : Motor driver

1. Terminal layout

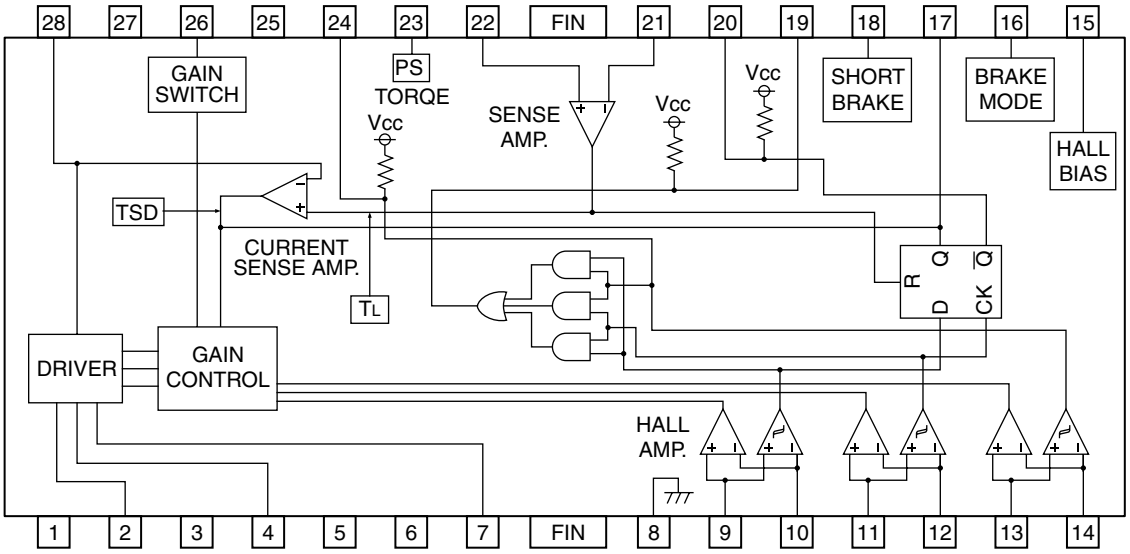



2. Truth table

| INPUT | | OUTPUT | | MODE |
|---|---|---|---|---|
| IN1 | IN2 | OUT1 | OUT2 | MOTOR |
| 0 | 0 | ∞ | ∞ | STOP |
| 1 | 0 | H | L | CW/CCW |
| 0 | 1 | L | H | CCW/CW |
| 1 | 1 | L | L | BRAKE |

## ■ BA6664FM (IC251) : Motor driver

1. Terminal layout & Block diagram

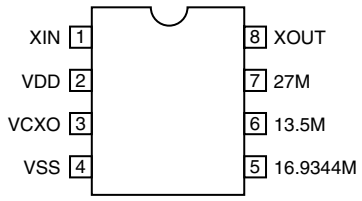



2. Pin function

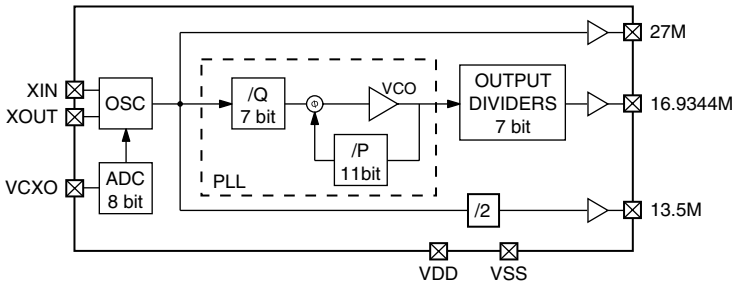
| Pin No. | Symbol | Function |
|---|---|---|
| 1 | NC | Not connect |
| 2 | A3 | Output terminal |
| 3 | NC | Not connect |
| 4 | A2 | Output terminal |
| 5 | NC | Not connect |
| 6 | NC | Not connect |
| 7 | A1 | Output terminal |
| 8 | GND | Ground terminal |
| 9 | H1+ | Hall signal input terminal |
| 10 | H1- | Hall signal input terminal |
| 11 | H2+ | Hall signal input terminal |
| 12 | H2- | Hall signal input terminal |
| 13 | H3+ | Hall signal input terminal |
| 14 | H3- | Hall signal input terminal |
| 15 | VH | Hall bias terminal |
| 16 | BR | Brake mode switching terminal (Not connect) |
| 17 | CNF | Connecting terminal for phase compensating capacitor |
| 18 | SB | Short brake terminal |
| 19 | FG2 | FG3-phase synthesizing signal output terminal (Not connect) |
| 20 | FR | Rotation detecting terminal (Not connect) |
| 21 | ECR | Reference terminal for output voltage control |
| 22 | EC | Output terminal for output voltage control |
| 23 | PS | Power save terminal |
| 24 | FG | FG signal output terminal |
| 25 | VCC | Power supply terminal |
| 26 | GSW | Gain switching terminal |
| 27 | VM | Power supply terminal for motor |
| 28 | RNF | Connecting terminal for output current detecting resistor |
| 29,30 | FIN | Ground |

## ■ CY24203SC (IC502) : Clock generator

1. Terminal layout

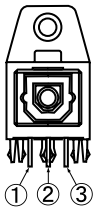



2. Block diagram

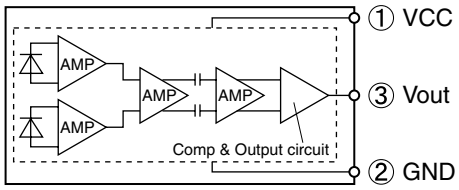



## ■ GP1FA351RZ (IC409) : Fiber optic receiver

1. Terminal layout

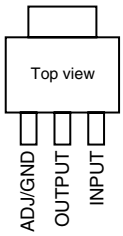



2. Block diagram

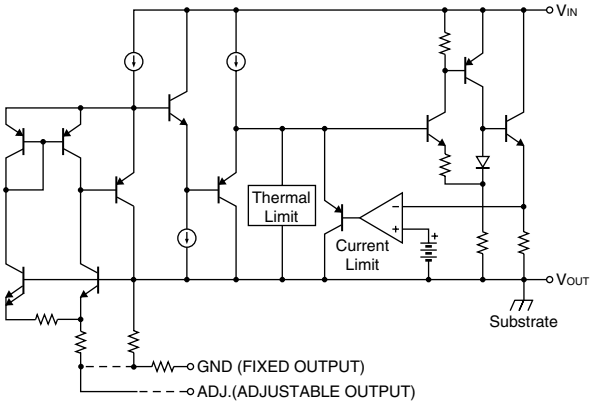



## ■ LM1117MP1.8 (IC511) : Regulator

1. Terminal layout

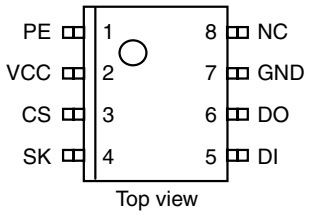



2. Block diagram




## ■ S-93C66AFJ (IC451) : Serial EEPROM

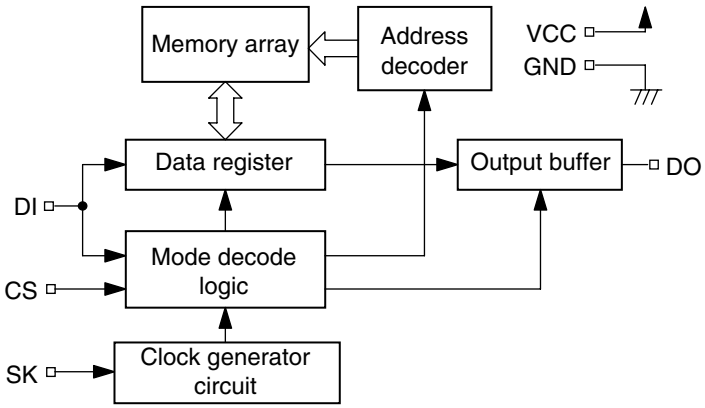
1. Terminal layout




2. Pin function

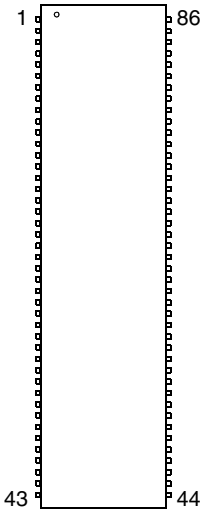
| Pin No. | Symbol | Function |
|---|---|---|
| 1 | PE | Not connect |
| 2 | VCC | Power supply |
| 3 | CS | Chip select input |
| 4 | SK | Serial clock input |
| 5 | DI | Serial data input |
| 6 | DO | Serial data output |
| 7 | GND | Ground |
| 8 | NC | Not connect |

3. Block diagram

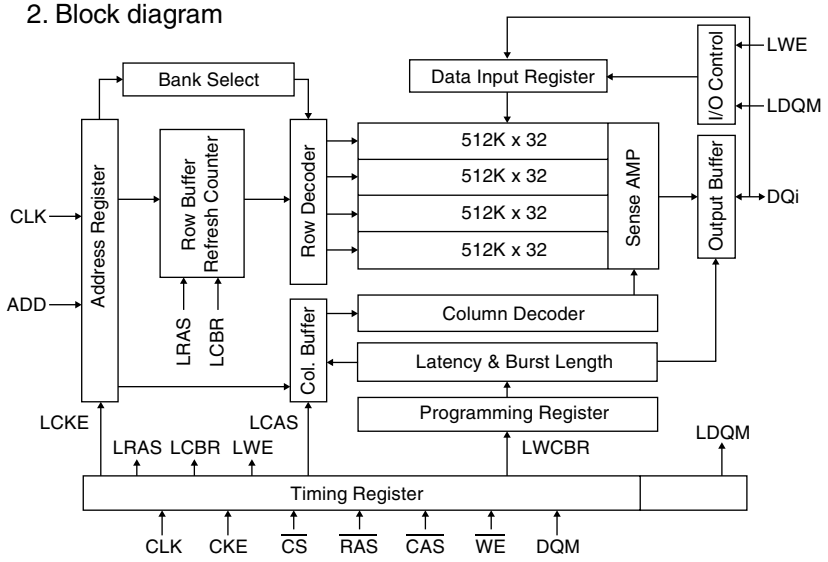


## ■ K4S643232E-TC60 (IC505) : 512K x 32 bit x 4 banks synchronous DRAM

1. Terminal layout




2. Block diagram

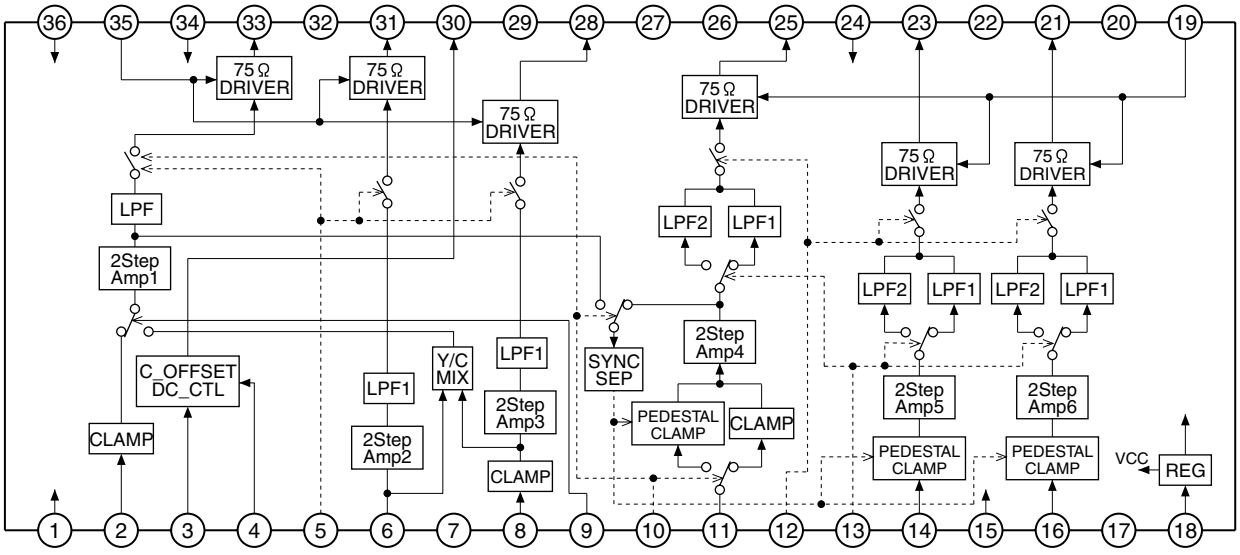



3. Pin function

| Pin No. | Symbol | Function |
|---|---|---|
| 1,15,29,43 | VDD | Power for the input buffers and core logic. |
| 2,4,5,7,8,10,11, 13,74,76,77,79, 80,82,83,85,31, 33,34,36,37,39, 40,42,45,47,48, 50,51,53,54,56 | DQ0 - DQ31 | Data inputs/outputs are multiplexed on the same pins. |
| 3,9,35,41,49 55,75,81 | VDDQ | Isolated power supply for the output buffers to provide improved noise immunity. |
| 6,12,32,38,46 52,78,84 | VSSQ | Isolated ground for the output buffers to provide improved noise immunity. |
| 14,21,30,57, 69,70,73 | N.C | This pin is recommended to be left no connection on the device. |
| 16,71,28,59 | DQM0 - DQM3 | Makes data output Hi-Z, $t_{SHZ}$ after the clock and masks the output. Blocks data input when DQM active. |
| 17 | $\overline{WE}$ | Enables write operation and row precharge. Latches data in starting from $\overline{CAS}$, $\overline{WE}$ active. |
| 18 | $\overline{CAS}$ | Latches column addresses on the positive going edge of the CLK with $\overline{CAS}$ low. Enables column access. |
| 19 | $\overline{RAS}$ | Latches row addresses on the positive going edge of the CLK with $\overline{RAS}$ low. Enables row access & precharge. |
| 20 | $\overline{CS}$ | Disables or enables device operation by masking or enabling all inputs except CLK, CKE and DQM. |
| 22,23 | BA0,BA1 | Selects bank to be activated during row address latch time. Selects bank for read/write during column address latch time. |
| 24,25 - 27, 60 - 66 | A10,A0 - A2, A3 - A9 | Row/column addresses are multiplexed on the same pins. Row address : $RA_0$ - $RA_{10}$, Column address : $CA_0$ - $CA_7$ |
| 44,58,72,86 | VSS | Ground for the input buffers and core logic. |
| 67 | CKE | Masks system clock to freeze operation from the next cycle. CKE should be enabled at least one cycle prior to new command. Disables input buffers for power down mode. |
| 68 | CLK | Active on the positive going edge to sample all inputs. |

## ■ LA73054 (IC601) : Video driver

1. Terminal layout & block diagram

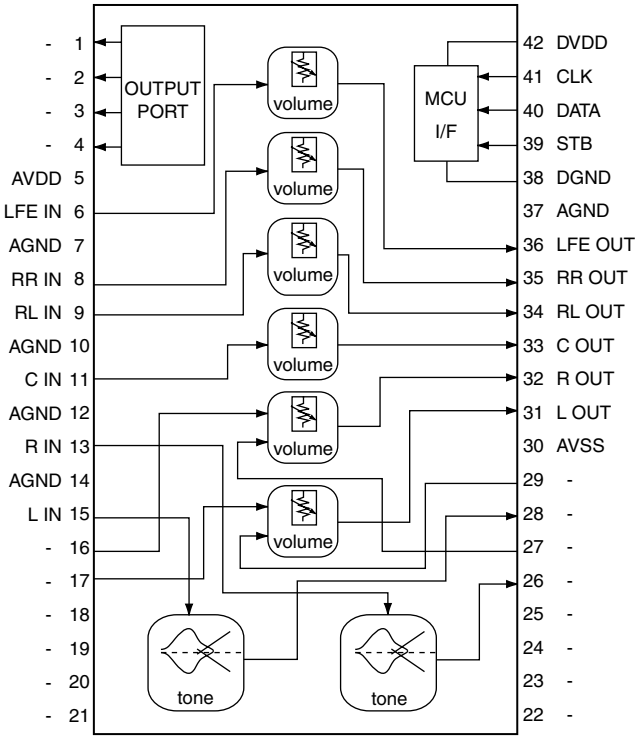



2. Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1,24,34 | VCC | - | Power supply |
| 2 | COMPOSITE IN | I | Composite video signal input |
| 3 | SQUEEZE SW | I | Selecting squeeze mode |
| 4 | LETTER-BOX SW | I | Selecting letter box mode |
| 5 | MUTE1 SW | I | Composite/S signal mute selection |
| 6 | CHROMA IN | I | Chrominance signal input |
| 7,17,20,22 26,27,29,32 | GND | - | Ground |
| 8 | Y-1 IN | I | Brightness signal input |
| 9 | YC MIX SW | I | Y/C-MIX control |
| 10 | RGB SW | I | Selection of a kind of signal (11pin) |
| 11 | Y-2 IN | I | Brightness signal input or baseband signal |
| 12 | MUTE2 SW | I | Component signal mute selection |
| 13 | LPF SW | I | Selection of a kind of component LPF |
| 14 | Cb IN | I | Component signal (Cb) input or baseband signal |
| 15 | AMP-2 SW | I | Selecting amplifier gain for component signal |
| 16 | Cr IN | I | Component signal (Cr) input or baseband signal |
| 18 | REG | O | Capacitor terminal for regulator |
| 19 | DRIVE-2 SW | I | 2drive/1drive select for component signal |
| 21 | Cr OUT | O | Component signal (Cr) output |
| 23 | Cb OUT | O | Component signal (Cb) output |
| 25 | Y-2 OUT | O | Brightness signal output |
| 28 | Y-1 OUT | O | Brightness signal output |
| 30 | C-DC OUT | O | DC voltage output (Not connect) |
| 31 | CHROMA OUT | O | Chrominance signal output |
| 33 | COMPOSITE OUT | O | Composite video signal output |
| 35 | DRIVE SW | I | 2drive/1drive select for composite/S signal |
| 36 | AMP-1 SW | I | Selecting amplifier gain for composite/S signal |

## ■ M62446FP (IC153) : 6CH Master volume

1. Terminal layout & Block Diagram



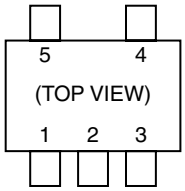

2.Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | - | - | SURROUND control terminal (Not connect) |
| 2 | - | - | BASS BOOST control terminal |
| 3 | - | - | Input attenuator control terminal |
| 4 | - | - | MUTING control terminal |
| 5 | AVDD | - | Analog positive power supply terminal |
| 6 | LFE IN | I | SUB Woofer volume signal input terminal |
| 7 | AGND | - | Analog ground terminal |
| 8 | RR IN | I | R ch volume signal input terminal for rear speaker |
| 9 | RL IN | I | L ch volume signal input terminal for rear speaker |
| 10 | AGND | - | Analog ground terminal |
| 11 | C IN | I | Center volume signal input terminal |
| 12 | AGND | - | Analog ground terminal |
| 13 | R IN | I | R ch volume signal input terminal |
| 14 | AGND | - | Analog ground terminal |
| 15 | L IN | I | L ch volume signal input terminal |
| 16,17 | - | - | Not connect |
| 18 | - | - | Frequency adjustment terminal tone/treble |
| 19~21 | - | - | Frequency adjustment terminal tone/bass |
| 22 | - | - | Tone output terminal |
| 23,24 | - | - | Frequency adjustment terminal tone/bass |
| 25 | - | - | Frequency adjustment terminal tone/treble |
| 26 | - | - | Frequency adjustment terminal tone/bass |
| 27 | - | - | L/R volume input terminal |
| 28 | - | - | Tone output terminal |

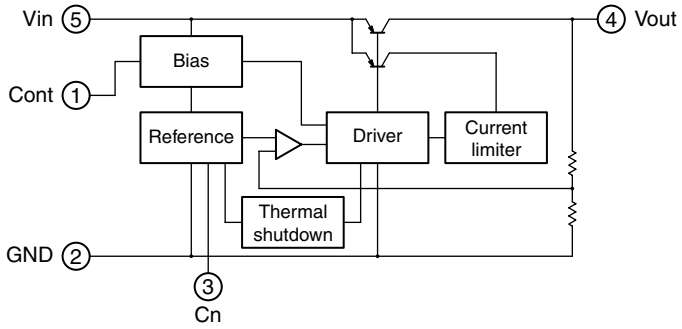
| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 29 | - | - | L/R volume input terminal |
| 30 | AVSS | - | Analog negative power supply terminal |
| 31 | L OUT | O | L ch output |
| 32 | R OUT | O | R ch output |
| 33 | C OUT | O | Center volume signal output terminal |
| 34 | RL OUT | O | L ch volume signal output terminal for rear speaker |
| 35 | RR OUT | O | R ch volume signal output terminal for rear speaker |
| 36 | LFE OUT | O | SUB Woofer volume signal output terminal |
| 37 | AGND | - | Analog ground terminal |
| 38 | DGND | - | Digital ground terminal |
| 39 | STB | I | Latch input terminal |
| 40 | DATA | I | Volume data input terminal |
| 41 | CLK | I | Clock input terminal for data transfer |
| 42 | DVDD | - | Digital power supply terminal |

## ■ MM1613DN (IC402) : Regulator

1. Terminal layout




2. Block diagram

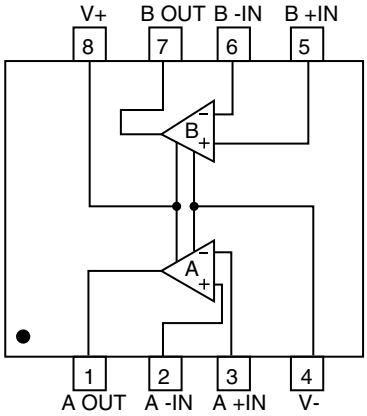



3. Pin function

| Pin No. | Symbol | Function |
|---|---|---|
| 1 | Cont | ON/OFF Control pin<br>Cont: H → Vo: ON; Cont: L → Vo: OFF<br>Cont pin must be connected with $V_{IN}$ pin, if it is not used. |
| 2 | GND | Ground |
| 3 | Cn | Noise decrease pin, Connecting 0.01uF capacitor can decrease output noise. |
| 4 | Vout | If the noise decrease capacitor is not connected, the pin may be influenced by outside noise.<br>Output pin, The capacitor must be connected with output pin more than 1uF. |
| 5 | Vin | Input pin<br>The capacitor is required to connect with input pin more than 1uF. |

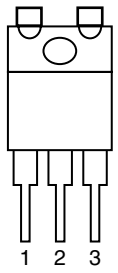
## ■ NJM4580M (IC158,IC159,IC160) : Dual operational amplifier

1. Terminal layout & Block diagram



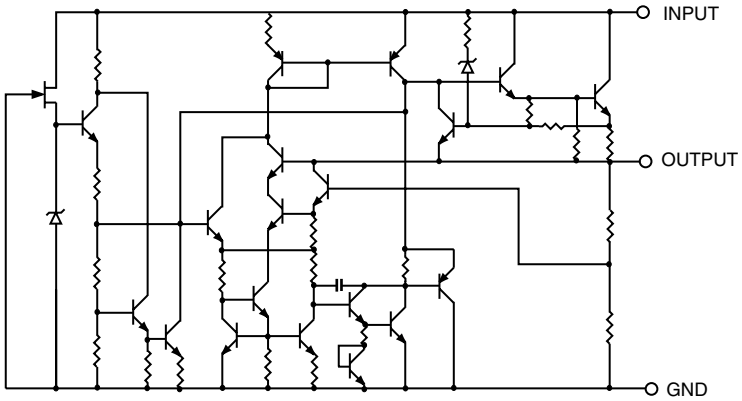

## ■ NJM78M05FA (IC805,IC953) : Regulator

1. Terminal layout



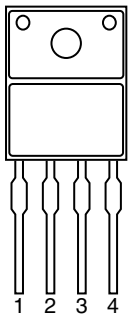

1.INPUT
2.GND
3.OUTPUT

2. Block diagram

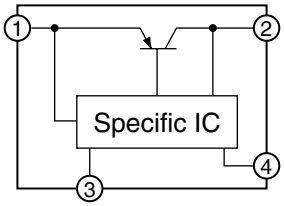



## ■ PQ05RD21 (IC951) : Regulator

1. Terminal layout



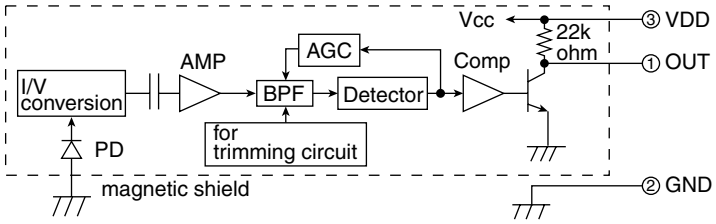

2. Block diagram




1.IN
2.OUT
3.GND
4.CTRL

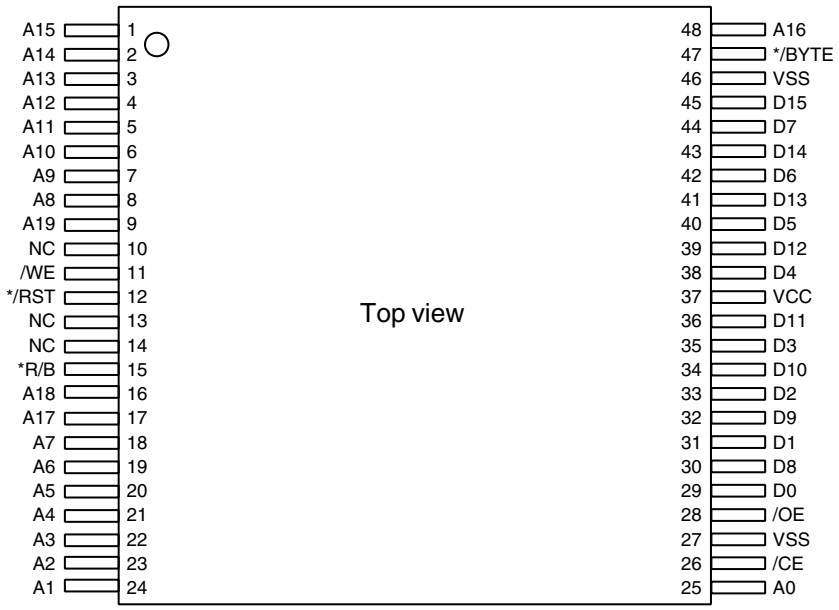
## ■ RPM6938-SV4 (IC711,IC871) : Remote control receiver

1. Block diagram

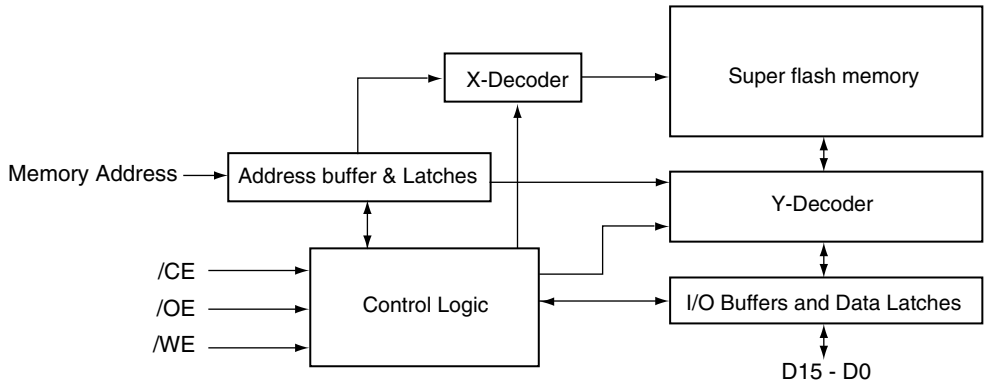


## ■ SST39VF160-7CEK (IC509) : 16 Mbit multi-purpose flash memory

1. Terminal layout




2. Block diagram

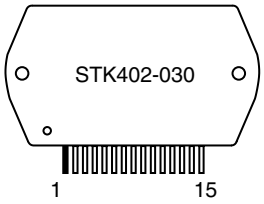



3. Pin function

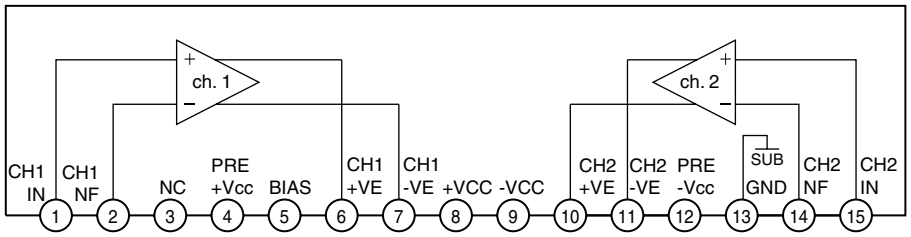
| Pin No. | Symbol | Function |
|---|---|---|
| 1 - 9,<br>16 - 25,48 | A19 - A0 | Address inputs : To provide memory addresses.<br>During Sector-Erase A19 - A11 address lines will select the sector.<br>During Block-Erase, A19 - A15 address line will select the block. |
| 10,12 - 15,47 | NC | No connection : Unconnected pins |
| 11 | /WE | Write Enable : To control the Write operations |
| 26 | /CE | Chip Enable : To activate the device when CE# is low |
| 27,46 | VSS | Ground |
| 28 | /OE | Output Enable : To gate the data output buffers |
| 29 - 36, 38 - 45 | D15 - D0 | Data input/output : To output data during Read cycles and receive input data during write cycles. Data is internally latched during a write cycle. The outputs are in tri-state when OE# or CE# is high. |
| 37 | VCC | Power supply : To provide power supply voltage (2.7 - 3.6V) |

## ■ STK402-030 (IC106) : Power amplifier

1.Terminal layout

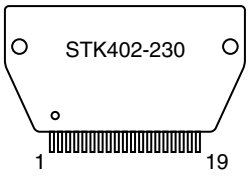



2.Block diagram

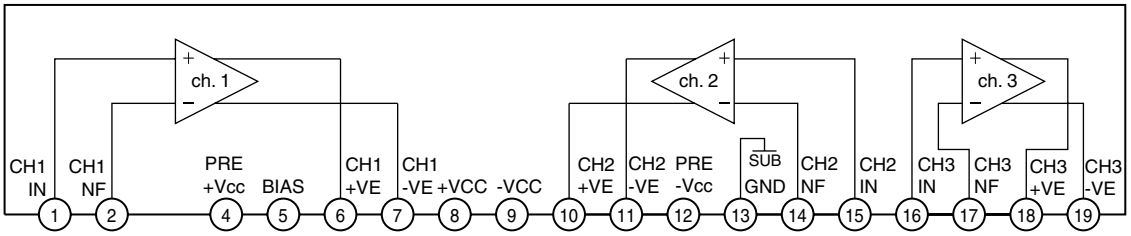



## ■ STK402-230 (IC107) : Power amplifier

1. Terminal layout

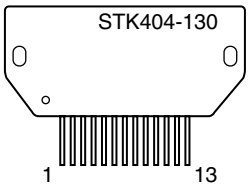



2.Block diagram

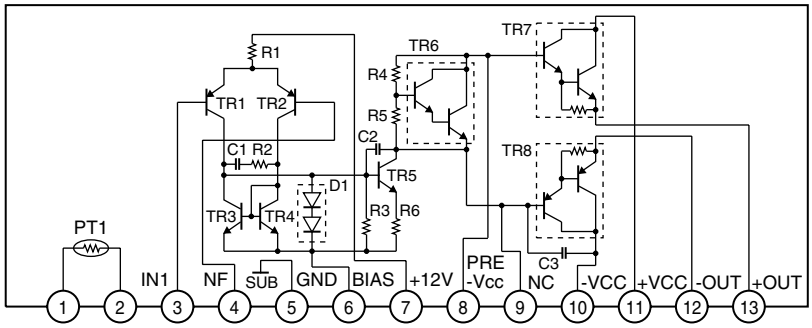



## ■ STK404-130 (IC105) : Power amplifier

1.Terminal layout

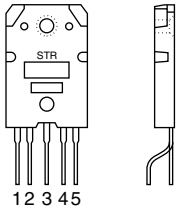



2.Block diagram

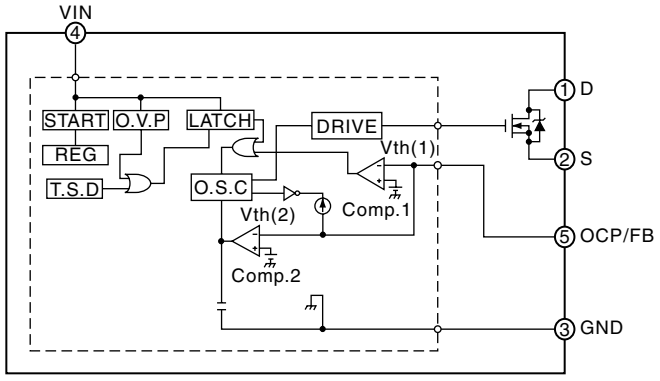



## ■ STR-G6651 (IC901) : Switching regulator

1.Terminal layout




2.Block diagram



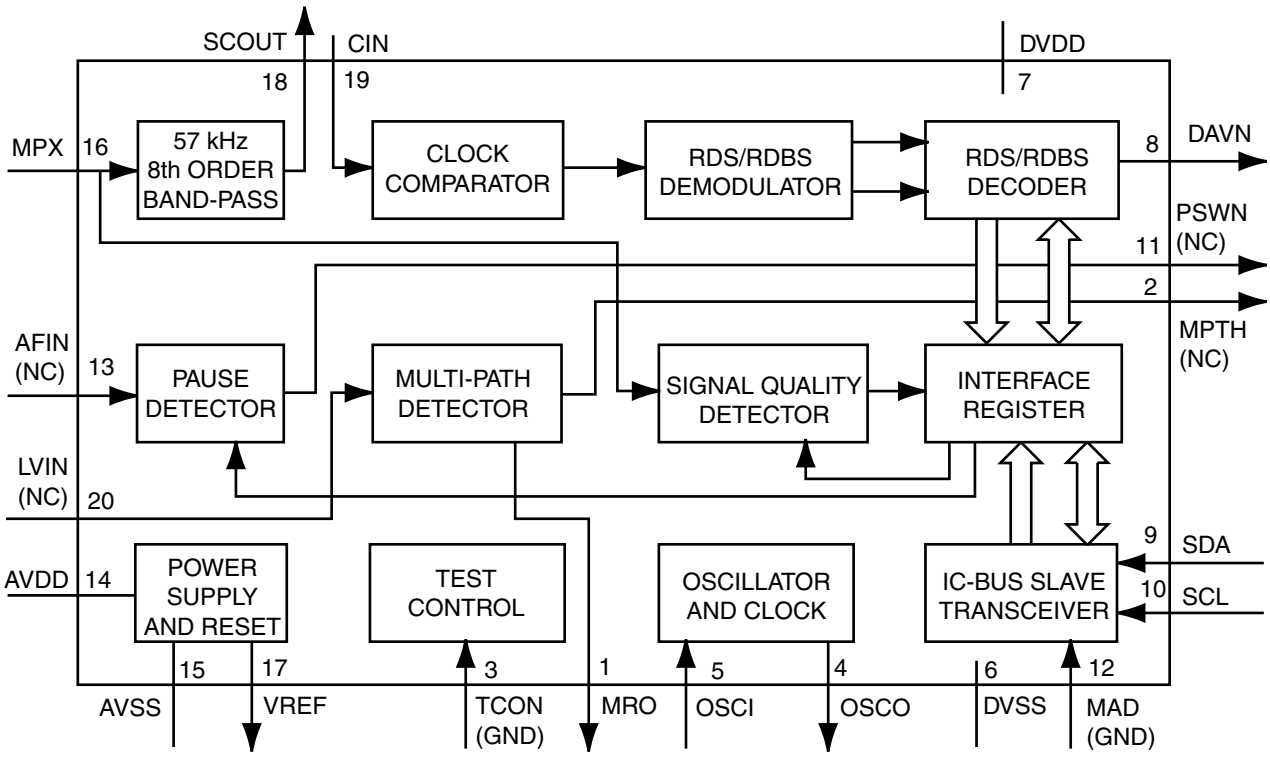
## ■ SAA6588 (IC191) : RDS detector

1.Terminal layout

2.Pin function

| Pin No. | Symbol | I/O | Function |
|---|---|---|---|
| 1 | MRO | O | Multi-path rectifier output |
| 2 | NC | - | Not connect |
| 3 | GND | - | Test control input pin, connect to ground |
| 4 | OSCO | O | Oscillator(4.322MHz) output |
| 5 | OSCI | I | Oscillator(4.322MHz) input |
| 6 | DVSS | - | Digital ground (0V) |
| 7 | DVDD | - | Digital power supply (5V) |
| 8 | DAVN | O | Data available output (active LOW) |
| 9 | SDA | I/O | IC-bus serial data I/O |
| 10 | SCL | I | IC-bus serial clock input |
| 11 | NC | - | Not connect |
| 12 | GND | - | Connect to ground |
| 13 | NC | - | Not connect |
| 14 | AVDD | - | Analog power supply (5V) |
| 15 | AVSS | - | Analog ground (0V) |
| 16 | MPX | I | Multiplex input signal |
| 17 | VREF | O | Reference voltage output |
| 18 | SCOUT | O | Band-pass filter output |
| 19 | CIN | O | Comparator output |
| 20 | NC | - | Level input, not connect |

3.Block diagram



JVC

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**No.21108**

200207

# PARTS LIST

## [ TH-V70R ]

* All printed circuit boards and its assemblies are not available as service parts.

Area suffix

B ---------- U.K.
E ---------- Continental Europe
EN ---------- Northern Europe

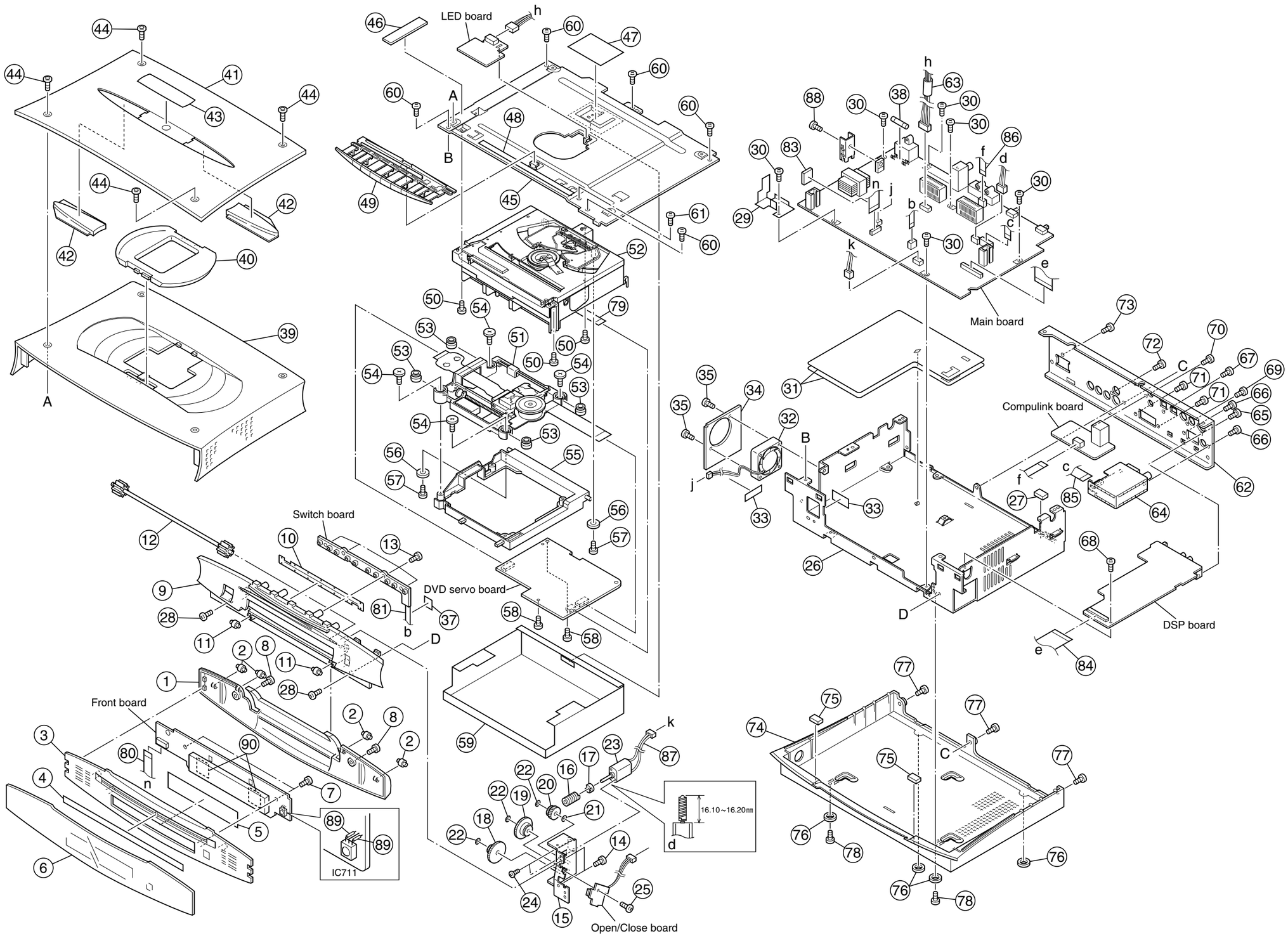
- Contents -

Exploded view of general assembly and parts list (Block No.M1) ---------- 3- 3
Exploded view of general assembly and parts list(SP-THV70) (Block No.M2) --- 3- 6
DVD mechanism assembly and parts list (Block No.MJ) ---------- 3- 8
DVD loading base assembly and parts list (Block No.MN) ---------- 3-10
Electrical parts list (Block No.01~07) ---------- 3-12
Packing materials and accessories parts list (Block No.M3,M5) ---------- 3-28
Packing materials and accessories parts list(SP-THV70) (Block No.M4,M6) --- 3-30

< MEMO >

# Exploded view of general assembly and parts list

Block No. M 1 M M



## ■ Parts list (General assembly)

Block No. M1MM

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | GV10091-003A | MOVING BASE | 1 | PS/PAINT | |
| | 2 | GV40269-001A | ROLLER | 4 | | |
| | 3 | GV10092-001A | MOVING PANEL | 1 | PS/PAINT | |
| | 4 | GV40334-001A | SHEET | 1 | | |
| | 5 | GV40356-001A | WINE RED SHEET | 1 | FOR FL TUBE COLOR | |
| | 6 | GV30238-013A | FRONT LENS | 1 | W/STRONG GLUE(3M) | |
| | 7 | QYSBSF2608Z | T.SCREW | 2 | FL PWB | |
| | 8 | QYSBSF2608Z | T.SCREW | 2 | M.PANEL+M.BASE | |
| | 9 | GV10090-010A | FRONT BASE | 1 | PS/PAINT | |
| | 10 | GV30235-002A | FELT | 1 | NO SCRATCH TO DISC | |
| | 11 | GV40269-001A | ROLLER | 2 | FRONT BASE | |
| | 12 | GV30308-002A | ROD GEAR ASS'Y | 1 | ROD + GEAR 2 | |
| | 13 | QYSBSF2608Z | T.SCREW | 4 | SW PWB | |
| | 14 | QYSBSF2608Z | T.SCREW | 2 | M BKT ASY+F.BASE | |
| | 15 | GV30237-002A | MOTOR BKT ASSY | 1 | FOR FL | |
| | 16 | GV40265-001A | WORM GEAR | 1 | MADE IN MALAYSIA | |
| | 17 | GV40266-001A | ROTOR | 1 | | |
| | 18 | GV40267-002A | GEAR 1 | 1 | | |
| | 19 | GV40338-001A | GEAR 2 | 1 | | |
| | 20 | LV30981-005A | CLUTCH ASS'Y | 1 | | |
| | 21 | QYWFL266010-9 | WASHER | 1 | CLUTCH | |
| | 22 | WDM214540 | WASHER | 3 | GEAR/CLUTCH | |
| | 23 | QAR0220-001 | DC MOTOR | 1 | | |
| | 24 | QYSPSPT2020Z | MINI SCREW | 2 | DC MOTOR+M.BKT | |
| | 25 | QYSBST2604Z | T.SCREW | 1 | OPEN/CLOSE PWB | |
| | 26 | LV10643-001A | BOTTOM CHASSIS | 1 | SECC-P T1.0 | |
| | 27 | LV30225-0F7A | SPACER | 1 | | |
| | 28 | QYSBSG3008Z | T.SCREW | 2 | BOTTOM+F.BASE | |
| | 29 | LV43075-001A | WIRE HOLDER | 1 | | |
| | 30 | QYSBSG3006Z | T.SCREW | 6 | BOTTOM+MAIN PWB | |
| | 31 | LV33595-001A | BARRIER | 2 | PRIMARY&15 WATT | |
| | 32 | QAR0148-001 | FAN MOTOR | 1 | WIRE 80->10 | |
| | 33 | LV30225-0F6A | SPACER | 2 | | |
| | 34 | GV40354-002A | FAN COVER | 1 | FOR FAN MOTOR | |
| | 35 | QYSBSGG3014Z | SCREW | 2 | FAN+B.CHASSIS | |
| | 37 | E3400-431 | SPACER | 1 | FOR E-CARD WIRE | |
| ⚠ | 38 | QMF51E2-1R6-J1 | FUSE | 1 | F 901 | |
| | 39 | GV10096-004A | TOP PANEL | 1 | PS/PAINT | |
| | 40 | GV30245-001A | LIGHT LENS | 1 | PMMA | |
| | 41 | LV10644-001A | TOP PLATE | 1 | | |
| | 42 | LV33317-002A | TOP LENS | 2 | PMMA/SILK X1 | |
| | 43 | LV33318-004A | TOP ORNAMENT | 1 | | |
| | 44 | LV42860-001A | SPECIAL SCREW1 | 4 | TOP PLATE+T.CHASSIS | |
| | 45 | GV10095-002A | TOP CHASSIS | 1 | SECC-P T0.8 | |
| | 46 | GV40333-001A | SPACER | 1 | | |
| | 47 | GV40330-001A | SPACER | 1 | STICK ON TOP CHASSIS | |
| | 48 | GV30349-002A | SPACER | 1 | STICK ON T.CHASSIS | |
| | 49 | GV20159-001A | PUSH BUTTON | 1 | ABS/PLATING | |

## ■ Parts list (General assembly)

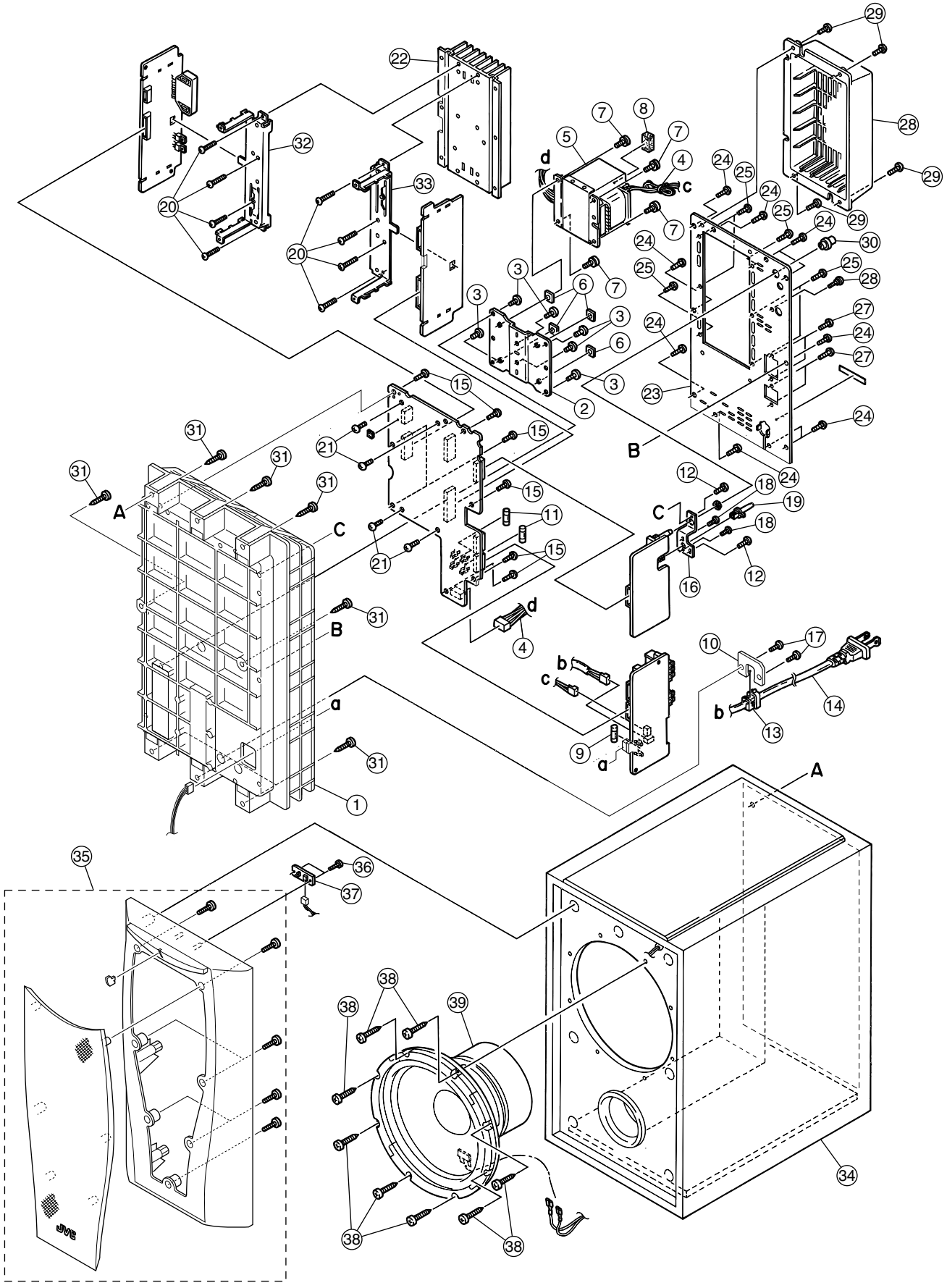
Block No. M1MM

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 50 | QYSBSG3008Z | T.SCREW | 3 | MECHA+TOP CHASSIS | |
| | 51 | ---------- | DVD MECHA | 1 | | |
| | 52 | ---------- | DVD LOADING | 1 | | |
| | 53 | LV43132-001A | INSULATOR | 4 | HARDNESS 7 DEGR | |
| | 54 | LE40860-001A | S. SCREW | 4 | | |
| | 55 | LV21207-006A | DVD ELEVATOR | 1 | | |
| | 56 | VKZ4563-006 | O-RING | 2 | FOR DVD ELEVATO | |
| | 57 | GV40133-001A | SPECIAL SCREW | 2 | | |
| | 58 | QYSBSF2006Z | SCREW | 2 | DVD M.PWB + LOADER | |
| | 59 | LV21296-001A | PROTECTOR | 1 | FOR DVD SLOT MECHA | |
| | 60 | QYSSST3006Z | SCREW | 5 | T.CHAS.+M.BKT*1 | |
| | 61 | QYSBST3006Z | T.SCREW | 1 | T.CHASSIS+MOTOR | |
| | 62 | LV21195-005A | REAR PANEL | 1 | SECC-P/SILKX1 | |
| | 63 | GV40329-001A | SPACER | 1 | ROLL MAIN-TOP WIRE | |
| | 64 | QAU0278-001 | TUNER | 1 | | |
| | 65 | QYSBSP3006M | SCREW | 1 | SYSTEM | |
| | 66 | QYSBST3006M | T.SCREW | 2 | FOR TUNER PACK | |
| | 67 | QYSBSGY3008M | SPECIAL SCREW | 1 | OPT IN | |
| | 68 | QYSBSG3006Z | T.SCREW | 1 | DSP PWB+BOTT.CHASSIS | |
| | 69 | QYSBSGY3008M | SPECIAL SCREW | 1 | AUX IN | |
| | 70 | QYSBSGY3008M | SPECIAL SCREW | 1 | AV COMPULINK | |
| | 71 | QYSBSGY3008M | SPECIAL SCREW | 2 | AV OUT 21PIN | |
| | 72 | QYSBSGY3008M | SPECIAL SCREW | 1 | S VIDEO | |
| | 73 | QYSBSGY3008M | SPECIAL SCREW | 1 | AC IN | |
| | 74 | GV10094-010A | BOTTOM PANEL | 1 | PS/PAINT | |
| | 76 | GV40270-001A | FOOT | 4 | BOTTOM PANEL | |
| | 77 | QYSBSG3008M | T.SCREW | 3 | R.PANEL+B.PANEL | |
| | 78 | QYSBSG3008M | T.SCREW | 2 | B.CHA+B.PANEL | |
| | 79 | QUQ210-0707DF | FFC WIRE | 1 | M.PCB TO DVD MECHA | |
| | 80 | QUQ110-1318AJ | FFC WIRE | 1 | CN802 TO CN701(FRONT) | |
| | 81 | WJT0082-001A | FFC WIRE | 1 | | |
| | 83 | E3400-431 | SPACER | 1 | FOR E-CARD WIRE | |
| | 84 | QUQ210-3110CJ | FFC WIRE | 1 | CN806 TO CN401(DSP) | |
| | 85 | QUQ412-1108CJ | FFC WIRE | 1 | CN805 TO TUNER | |
| | 86 | QUQ412-0406CJ | FFC WIRE | 1 | CN815 TO CN592 | |
| | 87 | WJM0133-001A | E-SI C WIRE C-F | 1 | MOTOR TO CN106 | |
| | 88 | QYSBSE3008Z | SCREW | 1 | FOR IC901+HS901 | |
| | 89 | QWTA100-005 | UL VINYL TUBE | 2 | FOR REMOCON SENSOR | |
| | 90 | GV40268-002A | SPACER | 2 | TOTAL THICKNESS | |

**< MEMO >**

# Exploded view of general assembly and parts list
## (SP-THV70)

Block No. M 2 M M



## ■ Parts list (SP-THV70 General assembly)

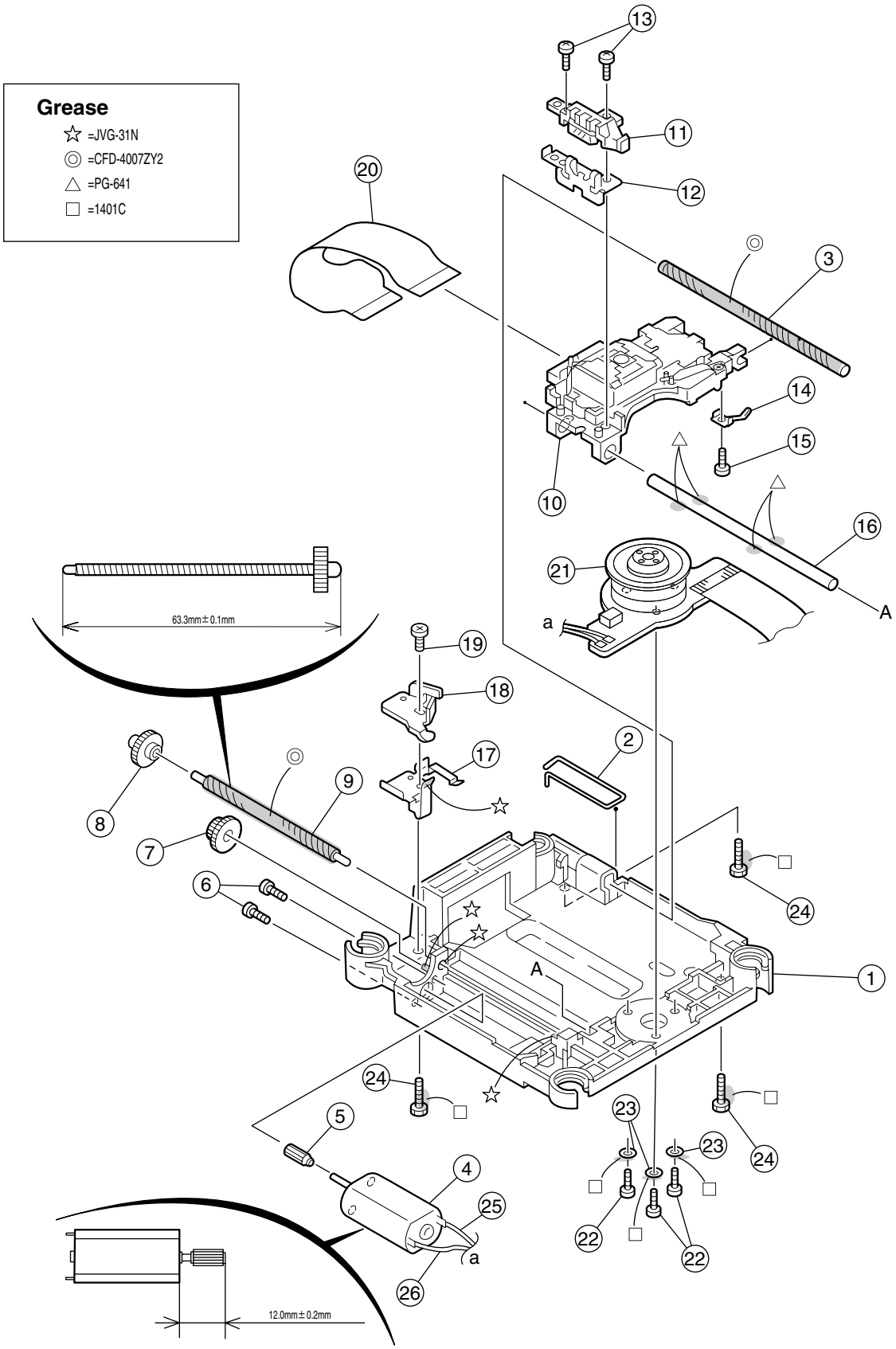
**Block No. M2MM**

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | LV10447-001A | MOLD BASE | 1 | | |
| | 2 | LV31723-001A | TRANS BRACKET | 1 | | |
| | 3 | QYSBSF4008Z | SCREW | 6 | FOR TRANS BKT | |
| | 4 | QZW0004-001 | WIRE CLAMP | 2 | | |
| ⚠ | 5 | QQT0297-003 | POWER TRANSF | 1 | T101 | |
| | 6 | E406309-002 | SPACER | 4 | | |
| | 7 | QYSDSTL4010E | SPECIAL SCREW | 4 | | |
| | 8 | LV30225-078A | SPACER | 1 | | |
| ⚠ | 9 | QMF51E2-2R5-J1 | FUSE | 1 | F 403 | |
| | 10 | LV42032-001A | AC BRACKET | 1 | | |
| ⚠ | 11 | QMFZ031-8R0-J1 | FUSE | 2 | F 504 F 505 | |
| | 12 | QYSBSF3008Z | SCREW | 2 | | |
| ⚠ | 13 | QHS3771-108 | CORD STOPPER | 1 | | |
| ⚠ | 14 | QMPN160-200-JD | POWER CORD | 1 | MOTHER TO H.BKT | B |
| ⚠ | | QMPK190-200-JC | POWER CORD | 1 | MOTHER TO H.BKT | E,EN |
| | 15 | QYSBSF3008Z | SCREW | 7 | | |
| | 16 | LV31756-001A | VOLUME BRACKET | 1 | | |
| | 17 | QYSBSF3008Z | SCREW | 2 | FOR BOLUME BKT | |
| | 18 | QYSBST3006Z | T.SCREW | 2 | FOR PUSH SW | |
| | 19 | E407321-002SM | PUSH BUTTON | 1 | | |
| | 20 | QYSBSG3016Z | T.SCREW | 8 | FOR TRTO H/S | |
| | 21 | QYSBSG3008E | T.SCREW | 4 | MOTHER TO H/SBK | |
| ⚠ | 22 | LV20656-002A | HEAT SINK | 1 | | |
| | 23 | LV20895-013A | REAR PANEL | 1 | | |
| | 24 | QYSDSF3008M | SCREW | 10 | TO MOLD BASE | |
| | 25 | QYSBSGY3008E | SPECIAL SCREW | 6 | FOR H/S | |
| | 26 | E73562-003 | SCREW | 1 | DIN.REAR | |
| | 27 | QYSBSGY3008E | SPECIAL SCREW | 4 | FOR SPK | |
| | 28 | LV20655-001A | H.S.COVER | 1 | | |
| | 29 | QYSBSG3008M | T.SCREW | 4 | | |
| | 30 | LV30734-002A | KNOB | 1 | | |
| | 31 | QYSDSA4025M | T.SCREW | 8 | | |
| | 32 | LV31722-002A | P.TR HOLDER | 1 | | |
| | 33 | LV31722-003A | P.TR HOLDER | 1 | | |
| | 34 | AA000027-02 | SPEAKER CABINET | 1 | | |
| | 35 | AA000028-02 | ORNAMENT PANEL | 1 | | |
| | 36 | 7004690801 | TAPPING SCREW | 2 | | |
| | 37 | 6600007421 | L.E.D.INDICATOR | 1 | | |
| | 38 | 7005942502 | SCREW | 8 | | |
| | 39 | CR200002-01 | SPEAKER | 1 | | |

# DVD mechanism assembly and parts list

Block No. M J M M

**EXL-V9-1YPC**



## ■ Parts list (DVD mechanism)

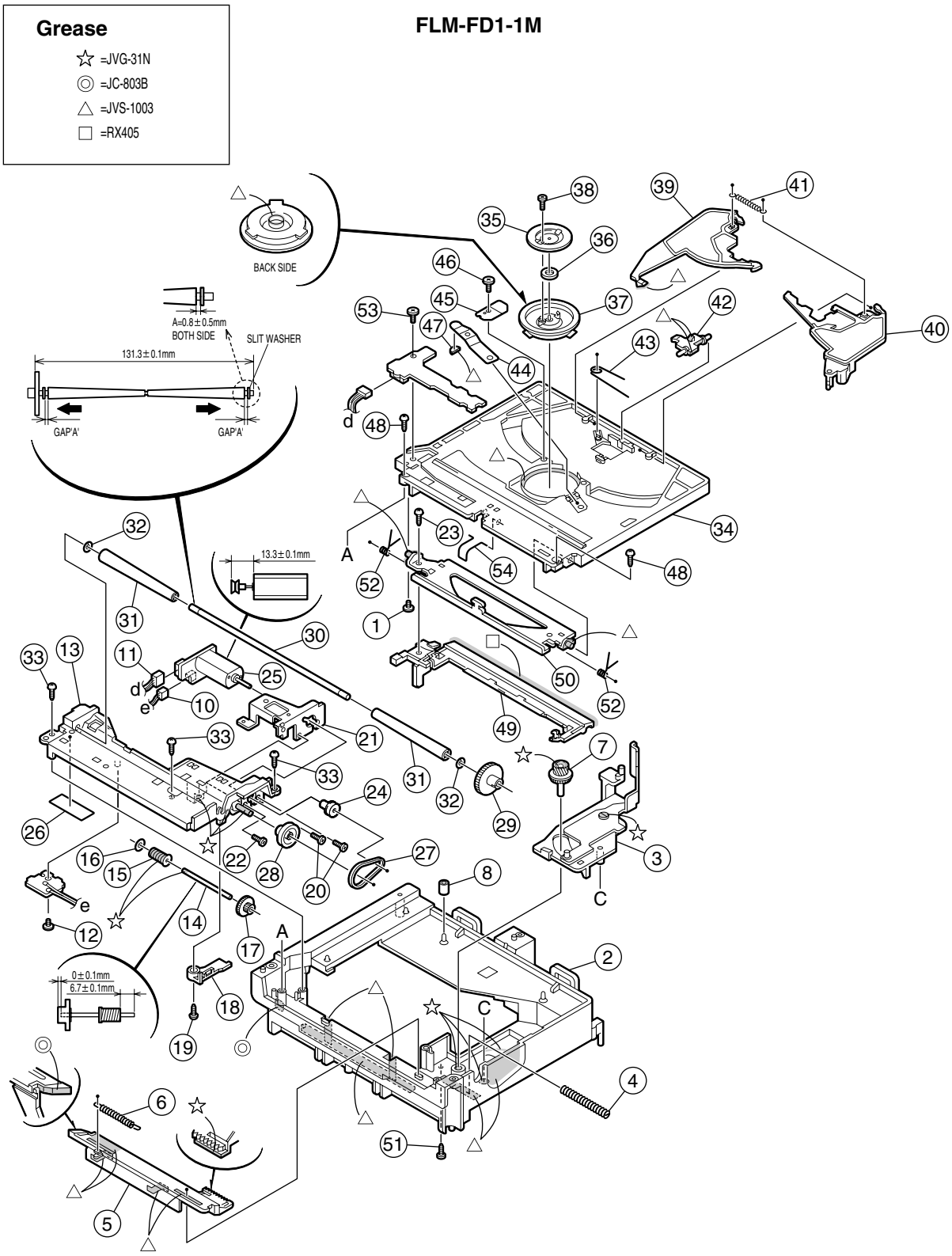
**Block No. MJMM**

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | LE10269-001A | MECHA.BASE | 1 | | |
| | 2 | LE40857-001A | BAR SPRING | 1 | | |
| | 3 | LV41121-002A | SHAFT | 1 | | |
| | 4 | QAR0215-001 | FEED MOTOR | 1 | | |
| | 5 | LV41510-001A | FEED GEAR T | 1 | | |
| | 6 | QYSPSPU2040M | SCREW | 2 | | |
| | 7 | LE40854-002A | FEED GEAR M | 1 | | |
| | 8 | LE40855-001A | FEED GEAR E | 1 | | |
| | 9 | LV41517-003A | LEAD SCREW | 1 | | |
| | 10 | QAL0342-001 | PICK UP | 1 | | |
| | 11 | LE20624-003A | SW.ACTUATOR | 1 | | |
| | 12 | LE31011-001A | LEAD SPRING | 1 | | |
| | 13 | QYSPSFU1740Z | SCREW | 2 | | |
| | 14 | LE31012-001A | P.U.SPRING | 1 | | |
| | 15 | QYSPSGU1430Z | SCREW | 1 | | |
| | 16 | LV41121-002A | SHAFT | 1 | | |
| | 17 | LE31009-001A | T.SPRING | 1 | | |
| | 18 | LE31010-001A | BRACKET | 1 | | |
| | 19 | QYSDSF2005Z | SCREW | 1 | | |
| | 20 | QAL0405-001 | FPC | 1 | | |
| | 21 | QAR0213-001 | SPINDLE MOTOR | 1 | | |
| | 22 | QYSPSPU1740Z | SCREW | 3 | | |
| | 23 | QYWSS183803Z | WASHER | 3 | | |
| | 24 | LE40858-002A | S.SCREW | 3 | | |
| | 25 | QUB549-05A1A1 | LUG WIRE | 1 | | |
| | 26 | QUB549-05A1A1 | LUG WIRE | 1 | | |

# DVD loading base assembly and parts list

Block No. M N M M

**FLM-FD1-1M**



## ■ Parts list (DVD loading base)

**Block No. MNMM**

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | 1 | LV41741-002A | SPECIAL SCREW | 1 | FOR PLATE AS | |
| | 2 | LV10647-006A | LOADING BASE | 1 | | |
| | 3 | LV33481-004A | KICK LEVER UNIT | 1 | | |
| | 4 | LV42819-002A | COMP.SPRING | 1 | | |
| | 5 | LV21204-003A | SLIDE CAM | 1 | | |
| | 6 | LV42977-001A | CAM SPRING | 1 | | |
| | 7 | LV33336-001A | UD GEAR | 1 | | |
| | 8 | LV43138-001A | DISC STOPPER | 1 | | |
| | 10 | WJM0294-002A | E-SI C WIRE C-F | 1 | | |
| | 11 | QJJ024-041504 | SIN CR C-C WIRE | 1 | | |
| | 12 | LV41741-001A | SPECIAL SCREW | 1 | FOR PWB | |
| | 13 | LV33482-006A | R.HOLD ASS'Y | 1 | | |
| | 14 | LV42813-001A | WORM SHAFT | 1 | | |
| | 15 | LV42812-002A | WORM GEAR | 1 | | |
| | 16 | WFM214050 | WASHER | 1 | | |
| | 17 | LV33335-002A | CONNECT GEAR | 1 | | |
| | 18 | LV33635-001A | SHAFT SUPPORTER | 1 | | |
| | 19 | QYSBSF2006Z | SCREW | 1 | | |
| | 20 | QYSPSPU2045M | SCREW | 2 | | |
| | 21 | LV33676-002A | ASSIST BRACKET | 1 | | |
| | 22 | QYSDST2005Z | SCREW | 1 | | |
| | 23 | QYSBSF2006Z | SCREW | 1 | | |
| | 24 | LV42811-001A | MOTOR PULLEY | 1 | | |
| | 25 | QAR0219-001 | LOADING MOTOR | 1 | | |
| | 26 | VYSA1R4-056 | SPACER | 1 | | |
| | 27 | LV42833-001A | BELT | 1 | | |
| | 28 | LV33334-001A | PULLEY GEAR | 1 | | |
| | 29 | LV42814-001A | ROLLER GEAR | 1 | | |
| | 30 | LV42815-002A | ROLLER SHAFT | 1 | | |
| | 31 | LV42816-001A | ROLLER | 2 | | |
| | 32 | QYWDL265019 | SLIT WASHER | 2 | | |
| | 33 | QYSBSF2006Z | SCREW | 3 | FOR R.HOLDER | |
| | 34 | LV10649-007A | CLAMPER BASE | 1 | | |
| | 35 | LV33344-001A | YOKE | 1 | | |
| | 36 | LV42930-003A | MAGNET | 1 | | |
| | 37 | LV33346-003A | DVD CLAMPER | 1 | | |
| | 38 | QYSPSGT1730M | MINI SCREW | 1 | | |
| | 39 | LV33339-002A | SELECT LEVER L | 1 | | |
| | 40 | LV33340-002A | SELECT LEVER R | 1 | | |
| | 41 | LV42820-003A | TENSION SPRING | 1 | | |
| | 42 | LV42821-004A | SD STOPPER | 1 | | |
| | 43 | LV42822-002A | TOPSION SPRING | 1 | | |
| | 44 | LV33342-002A | CLAMPER SPRING | 1 | | |
| | 45 | LV42991-001A | STOPPER | 1 | | |
| | 46 | LV41741-002A | SPECIAL SCREW | 1 | | |
| | 47 | LV43038-001A | PAD | 1 | | |
| | 48 | QYSBSF2006Z | SCREW | 2 | FOR C.BASE | |
| | 49 | LV21205-007A | PRESSURE PLATE | 1 | | |
| | 50 | LV42872-004A | PLATE ASS'Y | 1 | | |
| | 51 | QYSBSF2006Z | SCREW | 1 | | |
| | 52 | LV42971-001A | TORSION SPRING | 2 | | |
| | 53 | LV41741-002A | SPECIAL SCREW | 1 | FOR PWB | |
| | 54 | LV42965-001A | ROD SPRING | 1 | | |

■ **Electrical parts list (Main board)** **Block No. 01**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 191 | NCS31HJ-820X | C CAPACITOR | | |
| | C 192 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C 193 | NCB31HK-561X | C CAPACITOR | | |
| | C 194 | NCB31CK-104X | C CAPACITOR | | |
| | C 195 | NCB31HK-331X | C CAPACITOR | | |
| | C 196 | QETN1HM-225Z | E CAPACITOR | 2.2MF 20% 50V | |
| | C 197 | NCB31CK-473X | C CAPACITOR | | |
| | C 199 | QETN1CM-106Z | E CAPACITOR | 10MF 20% 16V | |
| | C 591 | NCS31HJ-221X | C.CAPA. C.M | | |
| | C 592 | NCS31HJ-221X | C.CAPA. C.M | | |
| | C 601 | QFLC1HJ-104Z | M CAPACITOR | .10MF 5% 50V | |
| | C 605 | QETN0JM-477Z | E CAPACITOR | 470MF 20% 6.3V | |
| | C 607 | NCS31HJ-181X | C CAPACITOR | | |
| | C 611 | QFLC1HJ-104Z | M CAPACITOR | .10MF 5% 50V | |
| | C 615 | QETN0JM-477Z | E CAPACITOR | 470MF 20% 6.3V | |
| | C 617 | NCS31HJ-181X | C CAPACITOR | | |
| | C 621 | QFLC1HJ-104Z | M CAPACITOR | .10MF 5% 50V | |
| | C 626 | NCS31HJ-181X | C CAPACITOR | | |
| | C 629 | QETN0JM-477Z | E CAPACITOR | 470MF 20% 6.3V | |
| | C 631 | NCB31CK-104X | C CAPACITOR | | |
| | C 635 | QETN0JM-477Z | E CAPACITOR | 470MF 20% 6.3V | |
| | C 636 | NCS31HJ-181X | C CAPACITOR | | |
| | C 637 | NCS31HJ-181X | C CAPACITOR | | |
| | C 639 | NCB31CK-104X | C CAPACITOR | | |
| | C 641 | QETN1AM-476Z | E CAPACITOR | 47MF 20% 10V | |
| | C 646 | NCS31HJ-181X | C CAPACITOR | | |
| | C 649 | QETN0JM-477Z | E CAPACITOR | 470MF 20% 6.3V | |
| | C 651 | QFLC1HJ-104Z | M CAPACITOR | .10MF 5% 50V | |
| | C 671 | QETN1AM-477Z | E CAPACITOR | 470MF 20% 10V | |
| | C 672 | NCB31CK-104X | C CAPACITOR | | |
| | C 673 | QETN1AM-477Z | E CAPACITOR | 470MF 20% 10V | |
| | C 694 | QETN0JM-477Z | E CAPACITOR | 470MF 20% 6.3V | |
| | C 802 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 803 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 806 | QEZ0554-479 | E CAPACITOR | 47000MF | |
| | C 807 | QEKC0JM-227Z | E CAPACITOR | 220MF 20% 6.3V | |
| | C 811 | QCF31HZ-103Z | C CAPACITOR | .010MF +80:-20% | |
| | C 814 | QEKC1AM-107Z | E CAPACITOR | 100MF 20% 10V | |
| | C 815 | QETN1CM-107Z | E CAPACITOR | 100MF 20% 16V | |
| | C 816 | QETN1AM-107Z | E CAPACITOR | 100MF 20% 10V | |
| | C 821 | NCB31HK-103X | C CAPACITOR | | |
| | C 822 | QEKC1HM-225Z | E CAPACITOR | 2.2MF 20% 50V | |
| | C 823 | NCB31HK-102X | C CAPACITOR | | |
| | C 824 | NCB31HK-223X | C CAPACITOR | | |
| | C 826 | QEKC1HM-224Z | E CAPACITOR | .22MF 20% 50V | |
| | C 828 | QETN1AM-107Z | E CAPACITOR | 100MF 20% 10V | |
| | C 831 | QCZ0202-155Z | ML C CAPA I/M | 1.5MF | |
| | C 836 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 837 | NCB31HK-103X | C CAPACITOR | | |
| | C 838 | QCZ0202-155Z | ML C CAPA I/M | 1.5MF | |
| ⚠ | C 902 | QFZ9075-683 | M CAPACITOR | .068MF | |
| ⚠ | C 904 | QCZ9079-102 | C CAPACITOR | 1000PF | |
| ⚠ | C 905 | QCZ9079-102 | C CAPACITOR | 1000PF | |
| ⚠ | C 907 | QEZ0522-826 | E CAPACITOR | 82MF | |
| | C 908 | QCZ0136-332Z | C CAPACITOR | 3300PF | |
| | C 909 | QCZ0136-101Z | C CAPACITOR | 100PF | |
| | C 910 | QCBB1HK-221Y | C CAPACITOR | 220PF 10% 50V | |
| | C 913 | QCZ0136-101Z | C CAPACITOR | 100PF | |
| | C 914 | QEZ0532-396Z | E CAPACITOR | 39MF | |
| | C 915 | QCBB1HK-471Y | C CAPACITOR | 470PF 10% 50V | |
| ⚠ | C 916 | QCZ9079-332 | C CAPACITOR | 3300PF | |
| | C 918 | QCFB1HZ-104Y | C CAPACITOR | .10MF +80:-20% | |
| | C 951 | NCS31HJ-101X | C.CAPA. C.M | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 952 | QCZ0136-101Z | C CAPACITOR | 100PF | |
| | C 953 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 954 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 956 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 957 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 960 | QEZ0529-826Z | E CAPACITOR | 82MF | |
| | C 961 | QCZ0202-155Z | ML C CAPA I/M | 1.5MF | |
| | C 962 | QEKC1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 963 | QEZ0533-396Z | E CAPACITOR | 39MF | |
| | C 964 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 965 | QEZ0528-108 | E CAPACITOR | 1000MF | |
| | C 966 | QETN1AM-477Z | E CAPACITOR | 470MF 20% 10V | |
| | C 967 | NCB31CK-104X | C CAPACITOR | | |
| | C 968 | NCB31CK-104X | C CAPACITOR | | |
| | C 969 | QETN1AM-227Z | E CAPACITOR | 220MF 20% 10V | |
| | C 970 | NCB31CK-104X | C CAPACITOR | | |
| | C 973 | QETN1AM-107Z | E CAPACITOR | 100MF 20% 10V | |
| | C 976 | QFVC1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 977 | QFVC1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 978 | QEKC1AM-107Z | E CAPACITOR | 100MF 20% 10V | |
| | C 979 | QEZ0530-827 | E CAPACITOR | 820MF | |
| | C 980 | QEKC1HM-106Z | E CAPACITOR | 10MF 20% 50V | |
| | C 981 | QCZ0202-155Z | ML C CAPA I/M | 1.5MF | |
| | C 982 | QEZ0531-567 | E CAPACITOR | 560MF | |
| | C 984 | QETN1EM-227Z | E CAPACITOR | 220MF 20% 25V | |
| | C 985 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 986 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 987 | QEZ0532-187Z | E CAPACITOR | 180MF | |
| | C 989 | QEKC1CM-107Z | E CAPACITOR | 100MF 20% 16V | |
| | C 990 | QEKC1HM-106Z | E CAPACITOR | 10MF 20% 50V | |
| | C 992 | QETN1HM-474Z | E CAPACITOR | .47MF 20% 50V | |
| | C 993 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 994 | QCBB1HK-223Y | C CAPACITOR | .022MF 10% 50V | |
| | C 997 | QEKC1CM-227Z | E CAPACITOR | 220MF 20% 16V | |
| | CN106 | QGA2501C1-02 | 2P CONNECTOR | | |
| | CN592 | QGF1205F1-04 | CONNECTOR | EXP VERSION | |
| | CN801 | QGB2027M7-26S | CONNECTOR | TO DVD MODULE | |
| | CN802 | QGF1016C1-13 | CONNECTOR | TO FRONT | |
| | CN803 | QGB2027M7-26S | CONNECTOR | TO DVD MODULE | |
| | CN805 | QGF1205C1-11 | CONNECTOR | TO TUNER | |
| | CN806 | QGF1016C1-31 | CONNECTOR | TO AUDIO | |
| | CN812 | QGA2001F1-05 | CONNECTOR | TO W812 | |
| | CN813 | QGF1205C1-04 | CONNECTOR | TO KEY | |
| | CN814 | QGA2001C1-03 | 3P PLUG ASSY | TO DOOR-SW | |
| | CN815 | QGF1205C1-04 | CONNECTOR | TO TERMINAL | |
| | CN972 | QGA2001C1-02 | 2P PLUG ASSY | FOR DC FAN | |
| ⚠ | CP951 | ICP-N10-T | ICP | | |
| ⚠ | CP952 | ICP-N5-T | ICP | | |
| | C1184 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C1185 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C1186 | QETN1AM-107Z | E CAPACITOR | 100MF 20% 10V | |
| | C1187 | QETN1AM-107Z | E CAPACITOR | 100MF 20% 10V | |
| | C1301 | NCB31HK-392X | C CAPACITOR | | |
| | C1302 | NCB31HK-392X | C CAPACITOR | | |
| | C1351 | QETN1CM-107Z | E CAPACITOR | 100MF 20% 16V | |
| | C1352 | QETN1CM-106Z | E CAPACITOR | 10MF 20% 16V | |
| | C1801 | QETN1CM-106Z | E CAPACITOR | 10MF 20% 16V | |
| | C1802 | QETN1CM-107Z | E CAPACITOR | 100MF 20% 16V | |
| | C1803 | QCZ0202-155Z | ML C CAPA I/M | 1.5MF | |
| | C8721 | NCB31HK-103X | C CAPACITOR | | |
| | C8722 | NCB31HK-103X | C CAPACITOR | | |
| | C8728 | NCF21AZ-475X | C CAPACITOR | | |
| | D 591 | MTZJ6.2C-T2 | Z DIODE I/M | | |

■ **Electrical parts list (Main board)** **Block No. 01**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | D 801 | 1SS133-T2 | SI DIODE IM | | |
| | D 802 | 1SS133-T2 | SI DIODE IM | | |
| | D 803 | 1SS133-T2 | SI DIODE IM | | |
| | D 807 | 1SS133-T2 | SI DIODE IM | | |
| | D 808 | 1SS133-T2 | SI DIODE IM | | |
| | D 809 | 1SS133-T2 | SI DIODE IM | | |
| | D 811 | 1SS133-T2 | SI DIODE IM | | |
| | D 812 | MTZJ4.7B-T2 | Z DIODE I M | | |
| | D 820 | 1SS133-T2 | SI DIODE IM | | |
| | D 821 | DAN202K-X | D.TRANSISTOR | | |
| ⚠ | D 901 | S1WB/A/60-4101 | BRIDGE DIODE | | |
| | D 902 | ERA18-04-T1 | FR DIODE | | |
| | D 903 | ERA18-04-T1 | FR DIODE | | |
| | D 904 | ERA18-04-T1 | FR DIODE | | |
| | D 908 | ERA18-04-T1 | FR DIODE | | |
| | D 910 | ERA18-04-T1 | FR DIODE | | |
| | D 911 | ERA18-04-T1 | FR DIODE | | |
| | D 950 | MTZJ36C-T2 | Z.DIODE I.M | | |
| | D 951 | ERA18-04-T1 | FR DIODE | FUJI | |
| | D 952 | ERA18-04-T1 | FR DIODE | FUJI | |
| ⚠ | D 953 | FMB-24 | FUSEIODE | | |
| ⚠ | D 954 | EU2YX-LFH6K | FR DIODE | | |
| ⚠ | D 956 | EU2YX-LFH6K | FR DIODE | | |
| ⚠ | D 957 | EU2YX-LFH6K | FR DIODE | | |
| | D 958 | 1SS133-T2 | SI DIODE IM | | |
| | D 960 | MTZJ3.6B-T2 | S.B.DIODE | | |
| | D 970 | 1SS133-T2 | SI DIODE IM | | |
| | D 975 | 1SS133-T2 | SI DIODE IM | | |
| | D 976 | 1SS133-T2 | SI DIODE IM | | |
| | D 984 | 1SS133-T2 | SI DIODE IM | | |
| | D 991 | MTZJ5.1B-T2 | ZENER DIODE | | |
| | D1184 | MTZJ7.5C-T2 | ZENER DIODE | | |
| | D1185 | MTZJ7.5C-T2 | ZENER DIODE | | |
| | D1351 | MA700A-T2 | S.B.DIODE | | |
| | D1352 | MTZJ6.8A-T2 | ZENER DIODE | | |
| | D8721 | SELU2L10C-T10 | LED | DISC LIGHT | |
| | D8722 | SELU2L10C-T10 | LED | DISC LIGHT | |
| | EP801 | QNZ0136-001Z | EARTH PLATE | | |
| | EP802 | QNZ0136-001Z | EARTH PLATE | | |
| | EP803 | QNZ0136-001Z | EARTH PLATE | | |
| | EP805 | QNZ0136-001Z | EARTH PLATE | | |
| | EP951 | QNZ0136-001Z | EARTH PLATE | | |
| | EP952 | QNZ0136-001Z | EARTH PLATE | | |
| | FC901 | QNG0003-001Z | FUSE CLIP | | |
| | FC902 | QNG0003-001Z | FUSE CLIP | | |
| | HS805 | LE40505-001A | HEAT SINK | FOR IC805 | |
| | HS901 | E70306-002 | HEAT SINK | FOR IC901 | |
| | HS964 | LE40505-001A | HEAT SINK | | |
| | IC108 | TA8409S | IC | MOTOR DRIVER | |
| | IC191 | SAA6588 | IC(RDS) | | |
| | IC601 | LA73054-X | IC | | |
| | IC801 | MN101C49GKD1 | IC | SYSTEM MICOM | |
| | IC803 | BD4740G-W | IC I.M | RESET | |
| | IC805 | NJM78M05FA | IC | A5V | |
| | IC871 | RPM6938-SV4 | IC | FOR VERTICAL | |
| ⚠ | IC901 | STR-G6651 | IC | | |
| | IC951 | PQ05RD21 | IC | | |
| | IC953 | NJM78M05FA | IC | | |
| | J 592 | QNS0089-001 | 3.5 JACK | AV COMPULINK 2 | |
| | J 601 | QNN0434-001 | PIN JACK | COMPOSITE/S | |
| | J 691 | QNZ0516-001 | RGB CONNECTOR | SCART | |
| | K 601 | NRSA63J-0R0X | MG RESISTOR | | |
| | K 605 | NQR0201-018X | INDUCTOR | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | K 611 | NRSA63J-0R0X | MG RESISTOR | | |
| | K 621 | NRSA63J-0R0X | MG RESISTOR | | |
| | K 631 | NRSA63J-0R0X | MG RESISTOR | | |
| | K 641 | NRSA63J-0R0X | MG RESISTOR | | |
| | K 651 | NRSA63J-0R0X | MG RESISTOR | | |
| | L 801 | QQL25CK-221Z | INDUCTOR | | |
| ⚠ | L 901 | QQR1105-001 | LINE FILTER | | |
| | L 951 | QQL01BK-R22Z | INDUCTOR | | |
| | L 952 | QQL44BK-220Z | INDUCTOR | | |
| | L 955 | QQL26AK-220Z | INDUCTOR | | |
| | L 957 | QQL244K-100Z | INDUCTOR | | |
| | L 959 | QQL244K-100Z | INDUCTOR | | |
| ⚠ | P 901 | QNC0081-001 | AC INLET | | |
| ⚠ | PC901 | PC123Y02 | IC(PHOTO COUPLE | | |
| ⚠ | PC902 | PC123Y02 | IC(PHOTO COUPLE | | |
| | PP904 | QZW0038-001 | WIRE CLAMP | | |
| | PP905 | QZW0038-001 | WIRE CLAMP | | |
| | PP906 | QZW0038-001 | WIRE CLAMP | | |
| | Q 671 | KRC102S-X | DIGITAL.TR | | |
| | Q 691 | KRC107S-X | DIGITAL.TR | | |
| | Q 692 | KRC107S-X | DIGITAL.TR | | |
| | Q 694 | KRA102S-X | DIGITAL.TR | | |
| | Q 801 | KRC107S-X | DIGITAL.TR | | |
| | Q 802 | KRC102S-X | DIGITAL.TR | | |
| | Q 803 | KRC102S-X | DIGITAL.TR | | |
| | Q 804 | KRC102S-X | DIGITAL.TR | | |
| | Q 805 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 807 | KRA102S-X | DIGITAL.TR | | |
| | Q 811 | KRC102S-X | DIGITAL.TR | | |
| | Q 812 | KTA1271/OY/-T | TRANSISTOR | | |
| | Q 813 | KRC102S-X | DIGITAL.TR | | |
| | Q 815 | KRC102S-X | DIGITAL.TR | BEAT CUT | |
| | Q 816 | KRC102S-X | DIGITAL.TR | | |
| | Q 818 | KRC111M-T | TR I/M | | |
| | Q 951 | 2SC3576-JVC-T | TRANSISTOR I/M | | |
| | Q 953 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 954 | SI2305DS-X | TRANSISTOR | | |
| | Q 955 | DTC124EKA-X | TRANSISTOR | | |
| | Q 957 | KRC117S-X | TR I/M | | |
| | Q 958 | KTA1271/OY/-T | TRANSISTOR | | |
| | Q 959 | KRC101M-T | TR I/M | | |
| | Q 960 | KTA1504/YG/-X | TRANSISTOR | | |
| | Q 961 | KTC3203/OY/-T | TRANSISTOR | | |
| | Q 964 | KTA1046/Y/ | TRANSISTOR | | |
| | Q 965 | KTC3875/YG/-X | TR I/M | | |
| | Q 991 | KTC3875/YG/-X | TR I/M | | |
| | Q1181 | KTC3203/OY/-T | TRANSISTOR | E.VOL +7V | |
| | Q1182 | KTA1271/OY/-T | TRANSISTOR | E.VOL -7V | |
| | Q1351 | KTA1271/OY/-T | TRANSISTOR | TUNER 5V | |
| | Q1352 | KTC3875/YG/-X | TR I/M | | |
| | Q1801 | KRC103M-T | TR I/M | | |
| | Q8711 | KRA102S-X | DIGITAL.TR | | |
| | Q8712 | KRC102S-X | DIGITAL.TR | | |
| | Q8713 | DTC114TKA-X | TRANSISTOR | | |
| | R 191 | NRSA63J-102X | MG RESISTOR | | |
| | R 192 | NRSA63J-474X | MG RESISTOR | | |
| | R 193 | NRSA63J-103X | MG RESISTOR | | |
| | R 194 | NRSA63J-103X | MG RESISTOR | | |
| | R 501 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 502 | NRSA63J-332X | MG RESISTOR | | |
| | R 503 | NRSA63J-392X | MG RESISTOR | | |
| | R 504 | NRSA63J-682X | MG RESISTOR | | |
| | R 505 | NRSA63J-153X | MG RESISTOR | | |

■ **Electrical parts list (Main board)** **Block No. 01**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R 506 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 507 | NRSA63J-332X | MG RESISTOR | | |
| | R 508 | NRSA63J-392X | MG RESISTOR | | |
| | R 509 | NRSA63J-682X | MG RESISTOR | | |
| | R 510 | NRSA63J-153X | MG RESISTOR | | |
| | R 593 | NRSA63J-101X | MG RESISTOR | | |
| | R 594 | NRSA63J-101X | MG RESISTOR | | |
| | R 601 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 602 | NRSA63J-360X | C RESISTOR | | |
| | R 604 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 605 | NRSA63J-750X | MG RESISTOR | | |
| | R 606 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 611 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 612 | NRSA63J-360X | C RESISTOR | | |
| | R 615 | NRSA63J-750X | MG RESISTOR | | |
| | R 616 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 624 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 625 | NRSA63J-330X | MG RESISTOR | | |
| | R 626 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 629 | NRSA63J-750X | MG RESISTOR | | |
| | R 635 | NRSA63J-750X | MG RESISTOR | | |
| | R 636 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 639 | NRSA63J-750X | MG RESISTOR | | |
| | R 641 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 642 | NRSA63J-360X | C RESISTOR | | |
| | R 643 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 649 | NRSA63J-750X | MG RESISTOR | | |
| | R 671 | NRSA63J-103X | MG RESISTOR | | |
| | R 672 | NRSA63J-103X | MG RESISTOR | | |
| | R 673 | NRSA63J-103X | MG RESISTOR | | |
| | R 674 | NRSA63J-103X | MG RESISTOR | | |
| | R 677 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 681 | NRSA63J-101X | MG RESISTOR | | |
| | R 682 | NRSA63J-103X | MG RESISTOR | | |
| | R 685 | NRSA63J-151X | MG RESISTOR | | |
| | R 686 | NRSA63J-151X | MG RESISTOR | | |
| | R 694 | NRSA63J-750X | MG RESISTOR | | |
| | R 696 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 697 | NRSA63J-821X | MG RESISTOR | | |
| | R 698 | NRSA63J-123X | MG RESISTOR | | |
| | R 813 | QRE141J-331Y | C RESISTOR | 330 5% 1/4W | |
| | R 814 | NRSA63J-103X | MG RESISTOR | | |
| | R 815 | NRSA63J-221X | MG RESISTOR | | |
| | R 816 | NRSA63J-104X | MG RESISTOR | | |
| | R 817 | NRSA63J-223X | MG RESISTOR | | |
| | R 818 | NRSA63J-472X | MG RESISTOR | | |
| | R 819 | NRSA63J-474X | MG RESISTOR | | |
| | R 821 | QRZ9006-4R7X | F RESISTOR | 4.7 1/4W | |
| | R 822 | NRSA63J-223X | MG RESISTOR | | |
| | R 823 | NRSA63J-223X | MG RESISTOR | | |
| | R 831 | NRSA63J-103X | MG RESISTOR | | |
| | R 832 | NRSA63J-103X | MG RESISTOR | | |
| | R 833 | NRSA63J-103X | MG RESISTOR | | |
| | R 834 | NRSA63J-104X | MG RESISTOR | | |
| | R 835 | NRSA63J-103X | MG RESISTOR | | |
| | R 836 | NRSA63J-103X | MG RESISTOR | | |
| | R 837 | NRSA63J-273X | MG RESISTOR | | |
| | R 838 | NRSA63J-103X | MG RESISTOR | | |
| | R 839 | NRSA63J-103X | MG RESISTOR | | |
| | R 840 | NRSA63J-103X | MG RESISTOR | | |
| | R 841 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 843 | NRSA63J-102X | MG RESISTOR | | |
| | R 844 | NRSA63J-202X | MG RESISTOR | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R 847 | NRSA63J-221X | MG RESISTOR | | |
| | R 848 | NRSA63J-221X | MG RESISTOR | | |
| | R 849 | NRSA63J-221X | MG RESISTOR | | |
| | R 850 | NRSA63J-221X | MG RESISTOR | | |
| | R 851 | NRSA63J-221X | MG RESISTOR | | |
| | R 852 | NRSA63J-123X | MG RESISTOR | | |
| | R 853 | NRSA63J-221X | MG RESISTOR | | |
| | R 854 | NRSA63J-393X | MG RESISTOR | | |
| | R 855 | NRSA63J-223X | MG RESISTOR | | |
| | R 856 | NRSA63J-123X | MG RESISTOR | | |
| | R 857 | NRSA63J-393X | MG RESISTOR | | |
| | R 858 | NRSA63J-153X | MG RESISTOR | | |
| | R 859 | NRSA63J-104X | MG RESISTOR | | |
| | R 861 | NRSA63J-102X | MG RESISTOR | | |
| | R 862 | NRSA63J-102X | MG RESISTOR | | |
| | R 864 | NRSA63J-102X | MG RESISTOR | | |
| | R 866 | NRSA63J-102X | MG RESISTOR | | |
| | R 867 | NRSA63J-103X | MG RESISTOR | | |
| | R 868 | NRSA63J-103X | MG RESISTOR | | |
| | R 871 | NRSA63J-332X | MG RESISTOR | | |
| | R 872 | NRSA63J-332X | MG RESISTOR | | |
| | R 873 | NRSA63J-473X | MG RESISTOR | | |
| | R 891 | QRE141J-181Y | C RESISTOR | 180 5% 1/4W | |
| | R 892 | QRE141J-151Y | C RESISTOR | 150 5% 1/4W | |
| | R 895 | NRSA63J-102X | MG RESISTOR | | |
| | R 896 | NRSA63J-103X | MG RESISTOR | | |
| | R 901 | QRL01DJ-683X | OMF RESISTOR | 68K 5% 1/1W | |
| | R 903 | QRE141J-270Y | C RESISTOR | 27 5% 1/4W | |
| | R 904 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 905 | QRL027J-683 | OMF RESISTOR | 68K 5% 1/2W | |
| | R 906 | QRJ146J-681X | UNF C RESISTOR | 680 5% 1/4W | |
| | R 907 | QRT027J-R47 | MF RESISTOR | 5% 1/2W | |
| | R 908 | QRE141J-332Y | C RESISTOR | 3.3K 5% 1/4W | |
| | R 910 | QRE141J-474Y | C RESISTOR | 470K 5% 1/4W | |
| | R 911 | QRE141J-474Y | C RESISTOR | 470K 5% 1/4W | |
| | R 952 | NRSA63J-103X | MG RESISTOR | | |
| | R 953 | NRSA63J-223X | MG RESISTOR | | |
| ⚠ | R 954 | QRZ9005-100X | F RESISTOR | 10 1/4W | |
| | R 955 | NRSA63J-223X | MG RESISTOR | | |
| | R 960 | NRSA63J-101X | MG RESISTOR | | |
| | R 961 | NRSA63J-681X | MG RESISTOR | | |
| | R 964 | NRSA63J-105X | MG RESISTOR | | |
| | R 965 | NRSA63J-103X | MG RESISTOR | | |
| | R 966 | NRSA63J-221X | MG RESISTOR | | |
| | R 969 | NRSA63J-221X | MG RESISTOR | | |
| | R 971 | NRSA63J-472X | MG RESISTOR | | |
| | R 972 | NRSA63J-122X | MG RESISTOR | | |
| | R 977 | NRSA63J-102X | MG RESISTOR | | |
| | R 980 | NRSA63J-272X | MG RESISTOR | | |
| | R 981 | NRSA63J-223X | MG RESISTOR | | |
| | R 983 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 984 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 985 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 986 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 987 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 988 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 989 | NRSA63J-333X | MG RESISTOR | | |
| | R 990 | NRSA63J-333X | MG RESISTOR | | |
| ⚠ | R1181 | QRZ9005-100X | F RESISTOR | 10 1/4W | |
| | R1182 | NRSA63J-222X | MG RESISTOR | | |
| | R1183 | NRSA63J-222X | MG RESISTOR | | |
| ⚠ | R1184 | QRZ9005-100X | F RESISTOR | 10 1/4W | |
| | R1303 | NRSA63J-102X | MG RESISTOR | | |

■ **Electrical parts list (Main board)** **Block No. 01**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R1304 | NRSA63J-102X | MG RESISTOR | | |
| | R1307 | QRE141J-163Y | C RESISTOR | 16K 5% 1/4W | |
| | R1308 | QRE141J-163Y | C RESISTOR | 16K 5% 1/4W | |
| | R1351 | NRSA63J-472X | MG RESISTOR | | |
| | R1352 | NRSA63J-103X | MG RESISTOR | | |
| | R1353 | NRSA63J-821X | MG RESISTOR | | |
| | R1802 | QRE141J-153Y | C RESISTOR | 15K 5% 1/4W | |
| | R1803 | QRE141J-243Y | C RESISTOR | 24K 5% 1/4W | |
| | R1806 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R1807 | QRE141J-151Y | C RESISTOR | 150 5% 1/4W | |
| | R8721 | NRSA63J-681X | MG RESISTOR | | |
| | R8722 | NRSA63J-681X | MG RESISTOR | | |
| | R8723 | NRSA63J-681X | MG RESISTOR | | |
| | R8724 | NRSA63J-681X | MG RESISTOR | | |
| | R8733 | NRSA63J-104X | MG RESISTOR | | |
| | R8741 | NRSA63J-331X | MG RESISTOR | | |
| | S 501 | QSW0683-001Z | PUSH SWITCH | | |
| | S 502 | QSW0683-001Z | PUSH SWITCH | | |
| | S 503 | QSW0683-001Z | PUSH SWITCH | | |
| | S 504 | QSW0683-001Z | PUSH SWITCH | | |
| | S 505 | QSW0683-001Z | PUSH SWITCH | | |
| | S 506 | QSW0683-001Z | PUSH SWITCH | | |
| | S 507 | QSW0683-001Z | PUSH SWITCH | | |
| | S 508 | QSW0683-001Z | PUSH SWITCH | | |
| | S 509 | QSW0683-001Z | PUSH SWITCH | | |
| | S 510 | QSW0683-001Z | PUSH SWITCH | | |
| | S 551 | QSW0851-001 | SW | DOOR SW(DOOR1/2 | |
| | S 691 | QSW0454-001 | SWITCH | NTSC/PAL.U-RGB/ | |
| | S 802 | QSW0454-001 | SWITCH | VERT/HOR SW | |
| ⚠ | T 901 | QQS0097-001 | SW TRANSF | DELTA ELECTRONI | |
| | W 802 | QJK018-031802 | SIN CR C-B WIRE | | |
| | W 812 | QJK021-052402 | SIN CR C-B WIRE | DISC LED | |
| | X 191 | QAX0263-001Z | CRYSTAL | 4.332MHZ | |
| | X 801 | QAX0246-001Z | C RESONATOR | 8MHZ | |

■ **Electrical parts list (Front board)** **Block No. 02**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 701 | NCB31CK-103X | C CAPACITOR | | |
| | C 702 | NCB31CK-103X | C CAPACITOR | | |
| | C 706 | NEA70JM-107X | E.CAPACITOR | | |
| | C 707 | NCB31CK-103X | C CAPACITOR | | |
| | C 709 | NEA71EM-475X | E.CAPACITOR. | | |
| | C 710 | NEA71EM-475X | E.CAPACITOR. | | |
| | C 733 | NEA70JM-107X | E.CAPACITOR | | |
| | CN701 | QGF1016F2-13W | CONNECTOR | FRONT TO MAIN | |
| | D 701 | EL-19-21SDRC/-X | LED | | |
| | D 702 | EL-19-21SDRC/-X | LED | | |
| | D 703 | EL-19-21SDRC/-X | LED | | |
| | D 704 | EL-19-21SDRC/-X | LED | | |
| | D 705 | EL-19-21SDRC/-X | LED | | |
| | D 706 | EL-19-21SDRC/-X | LED | | |
| | D 707 | EL-19-21SDRC/-X | LED | | |
| | D 708 | EL-19-21SDRC/-X | LED | | |
| | D 709 | EL-19-21SDRC/-X | LED | | |
| | D 710 | EL-19-21SDRC/-X | LED | | |
| | D 711 | EL-19-21SDRC/-X | LED | | |
| | D 712 | EL-19-21SDRC/-X | LED | | |
| | D 713 | EL-19-21SDRC/-X | LED | | |
| | D 714 | EL-19-21SDRC/-X | LED | | |
| | D 715 | EL-19-21SDRC/-X | LED | | |
| | D 716 | EL-19-21SDRC/-X | LED | | |
| | D 717 | EL-19-21SDRC/-X | LED | | |
| | D 718 | EL-19-21SDRC/-X | LED | | |
| | D 719 | EL-19-21SDRC/-X | LED | | |
| | D 720 | EL-19-21SDRC/-X | LED | | |
| | DI701 | QLF0097-001 | FL TUBE | | |
| | IC701 | MN101C35DKB | IC(MPU) | | |
| | IC711 | RPM6938-SV4 | IC | FOR HORIZONTAL | |
| | Q 706 | KRC102S-X | DIGITAL.TR | | |
| | Q 707 | KRC102S-X | DIGITAL.TR | | |
| | Q 709 | KRA102S-X | DIGITAL.TR | | |
| | Q 710 | KRC102S-X | DIGITAL.TR | | |
| | Q 711 | KRA102S-X | DIGITAL.TR | | |
| | Q 712 | KRC102S-X | DIGITAL.TR | | |
| | Q 713 | KRA102S-X | DIGITAL.TR | | |
| | Q 721 | KRA102S-X | DIGITAL.TR | | |
| | Q 722 | KRA102S-X | DIGITAL.TR | | |
| | Q 723 | KRC102S-X | DIGITAL.TR | | |
| | R 752 | NRSA63J-102X | MG RESISTOR | | |
| | R 753 | NRSA63J-102X | MG RESISTOR | | |
| | R 755 | NRSA63J-102X | MG RESISTOR | | |
| | R 756 | NRSA63J-102X | MG RESISTOR | | |
| | R 761 | NRS181J-221X | MG RESISTOR | | |
| | R 762 | NRS181J-122X | MG RESISTOR | | |
| | R 763 | NRS181J-122X | MG RESISTOR | | |
| | R 764 | NRS181J-152X | MG RESISTOR | | |
| | R 765 | NRS181J-152X | MG RESISTOR | | |
| | R 766 | NRS181J-221X | MG RESISTOR | | |
| | R 767 | NRS181J-122X | MG RESISTOR | | |
| | R 768 | NRS181J-122X | MG RESISTOR | | |
| | R 769 | NRS181J-152X | MG RESISTOR | | |
| | R 770 | NRS181J-152X | MG RESISTOR | | |
| | R 771 | NRSA63J-391X | MG RESISTOR | | |
| | R 772 | NRS181J-391X | MG RESISTOR | | |
| | X 701 | NAX0248-001X | C OSCILLATOR | 8MHZ | |

■ **Electrical parts list (DSP/Audio board)** **Block No. 03**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 401 | NCB31HK-102X | C CAPACITOR | | |
| | C 402 | NCB31HK-102X | C CAPACITOR | | |
| | C 403 | NEA70JM-476X | E.CAPACITOR | | |
| | C 404 | NEA70JM-476X | E.CAPACITOR | | |
| | C 405 | NCB31CK-104X | C CAPACITOR | | |
| | C 406 | NCB31CK-104X | C CAPACITOR | | |
| | C 407 | NCB31CK-104X | C CAPACITOR | | |
| | C 408 | NEA70JM-476X | E.CAPACITOR | | |
| | C 411 | NCB31CK-104X | C CAPACITOR | | |
| | C 413 | NCB31CK-104X | C CAPACITOR | | |
| | C 421 | NEA70JM-107X | E.CAPACITOR | | |
| | C 422 | NCB31CK-103X | C CAPACITOR | | |
| | C 423 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 424 | NCS31HJ-121X | C CAPACITOR | | |
| | C 425 | NCB31AK-474X | C CAPACITOR | | |
| | C 426 | NCB31CK-103X | C CAPACITOR | | |
| | C 427 | NCB31CK-104X | C CAPACITOR | | |
| | C 428 | NCB31CK-104X | C CAPACITOR | | |
| | C 429 | NCB31CK-104X | C CAPACITOR | | |
| | C 430 | NCB31CK-473X | C CAPACITOR | | |
| | C 431 | NCS31HJ-180X | C CAPACITOR | | |
| | C 432 | NCS31HJ-220X | C CAPACITOR | | |
| | C 433 | NCB31CK-103X | C CAPACITOR | | |
| | C 434 | NEA70JM-107X | E.CAPACITOR | | |
| | C 435 | NCB31CK-103X | C CAPACITOR | | |
| | C 436 | NEA70JM-476X | E.CAPACITOR | | |
| | C 437 | NCB31CK-103X | C CAPACITOR | | |
| | C 442 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 443 | NCS31HJ-101X | C.CAPA. C.M | | |
| | C 444 | NCB31CK-103X | C CAPACITOR | | |
| | C 445 | NEA70JM-107X | E.CAPACITOR | | |
| | C 450 | NCS31HJ-471X | C CAPACITOR | | |
| | C 451 | NCB31CK-103X | C CAPACITOR | | |
| | C 452 | NEA70JM-107X | E.CAPACITOR | | |
| | C 453 | NEA70JM-107X | E.CAPACITOR | | |
| | C 454 | NCB31CK-103X | C CAPACITOR | | |
| | C 455 | NEA70JM-107X | E.CAPACITOR | | |
| | C 456 | NCB31CK-104X | C CAPACITOR | | |
| | C 458 | NCB31CK-103X | C CAPACITOR | | |
| | C 459 | NCB31CK-103X | C CAPACITOR | | |
| | C 460 | NEA71CM-476X | E CAPACITOR | | |
| | C 461 | NEA71CM-476X | E CAPACITOR | | |
| | C 462 | NCB31CK-103X | C CAPACITOR | | |
| | C 463 | NEA70JM-107X | E.CAPACITOR | | |
| | C 466 | NEA71CM-476X | E CAPACITOR | | |
| | C 467 | NCF31CZ-104X | C CAPACITOR | | |
| | C 493 | NCB30JK-105X | C CAPACITOR | | |
| | C 494 | NCB31CK-103X | C CAPACITOR | | |
| | C 495 | NCB31CK-103X | C CAPACITOR | | |
| | CN401 | QGF1016F2-31W | CONNECTOR | | |
| | C1101 | NCB31HK-331X | C CAPACITOR | | |
| | C1102 | NCB31HK-331X | C CAPACITOR | | |
| | C1103 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1104 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1121 | NCB31CK-223X | C CAPACITOR | | |
| | C1122 | NCB31HK-822X | C CAPACITOR | | |
| | C1123 | NCB31HK-153X | C CAPACITOR | | |
| | C1124 | NCB21CK-334X | C.CAPA. C.M | | |
| | C1125 | NCB31CK-223X | C CAPACITOR | | |
| | C1126 | NCB31CK-223X | C CAPACITOR | | |
| | C1127 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1128 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1129 | NCB31HK-822X | C CAPACITOR | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C1130 | NCB21CK-334X | C.CAPA. C.M | | |
| | C1131 | NCB31HK-153X | C CAPACITOR | | |
| | C1141 | NEA71CM-476X | E CAPACITOR | | |
| | C1142 | NEA71CM-476X | E CAPACITOR | | |
| | C1176 | NCB31CK-103X | C CAPACITOR | | |
| | C1177 | NCB31CK-103X | C CAPACITOR | | |
| | C1178 | NCB31CK-103X | C CAPACITOR | | |
| | C1179 | NCB31CK-103X | C CAPACITOR | | |
| | C1180 | NCB31CK-103X | C CAPACITOR | | |
| | C1181 | NCB31CK-103X | C CAPACITOR | | |
| | C1183 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1201 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1202 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1203 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1204 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1205 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1206 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1207 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1208 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1209 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1210 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1211 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1212 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1213 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1214 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1215 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1216 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1217 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1218 | NEA71EM-475X | E.CAPACITOR. | | |
| | C1221 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C1222 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C1223 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C1224 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C1225 | NCS31HJ-471X | C CAPACITOR | | |
| | C1226 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C1251 | NCB31CK-103X | C CAPACITOR | | |
| | C1252 | NCB31CK-103X | C CAPACITOR | | |
| | C2503 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2504 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2507 | NCS31HJ-560X | C CAPACITOR | | |
| | C2508 | NCS31HJ-560X | C CAPACITOR | | |
| | C2511 | NCB31AK-474X | C CAPACITOR | | |
| | C2512 | NCB31AK-474X | C CAPACITOR | | |
| | C2513 | NCB31HK-182X | C CAPACITOR | | |
| | C2514 | NCB31HK-182X | C CAPACITOR | | |
| | C2515 | NCS31HJ-181X | C CAPACITOR | | |
| | C2516 | NCS31HJ-181X | C CAPACITOR | | |
| | C2517 | NCB31HK-562X | C CAPACITOR | | |
| | C2518 | NCB31HK-562X | C CAPACITOR | | |
| | C2519 | NCF31CZ-104X | C CAPACITOR | | |
| | C2520 | NCF31CZ-104X | C CAPACITOR | | |
| | C2525 | NCB21HK-102X | C CAPACITOR | | |
| | C2526 | NCB21HK-102X | C CAPACITOR | | |
| | C2527 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2528 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2531 | NCS31HJ-560X | C CAPACITOR | | |
| | C2532 | NCS31HJ-560X | C CAPACITOR | | |
| | C2533 | NEA71HM-105X | E.CAPA. C.M. | | |
| | C2534 | NEA71HM-105X | E.CAPA. C.M. | | |
| | C2539 | NCF31CZ-104X | C CAPACITOR | | |
| | C2540 | NCF31CZ-104X | C CAPACITOR | | |
| | C2541 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2542 | NEA71EM-475X | E.CAPACITOR. | | |

■ **Electrical parts list (DSP/Audio board)** **Block No. 03**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C2553 | NCB31HK-562X | C CAPACITOR | | |
| | C2554 | NCB31HK-562X | C CAPACITOR | | |
| | C2555 | NCF31CZ-104X | C CAPACITOR | | |
| | C2556 | NCF31CZ-104X | C CAPACITOR | | |
| | C2561 | NEA71HM-105X | E.CAPA. C.M. | | |
| | C2562 | NEA71HM-105X | E.CAPA. C.M. | | |
| | C2563 | NCS31HJ-220X | C CAPACITOR | | |
| | C2564 | NCS31HJ-220X | C CAPACITOR | | |
| | C2569 | NCF31CZ-104X | C CAPACITOR | | |
| | C2570 | NCF31CZ-104X | C CAPACITOR | | |
| | C2575 | NCB31HK-102X | C CAPACITOR | | |
| | C2576 | NCB31HK-102X | C CAPACITOR | | |
| | C2577 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2578 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2581 | NEA71HM-105X | E.CAPA. C.M. | | |
| | C2582 | NEA71CM-106X | E.CAPACITOR | | |
| | C2583 | NCS31HJ-220X | C CAPACITOR | | |
| | C2584 | NCS31HJ-560X | C CAPACITOR | | |
| | C2589 | NCF31CZ-104X | C CAPACITOR | | |
| | C2590 | NCF31CZ-104X | C CAPACITOR | | |
| | C2592 | NCB31HK-472X | C CAPACITOR | | |
| | C2594 | NCB31HK-223X | C CAPACITOR | | |
| | C2595 | NCB31HK-102X | C CAPACITOR | | |
| | C2597 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2598 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2599 | NCF31CZ-104X | C CAPACITOR | | |
| | C2600 | NCF31CZ-104X | C CAPACITOR | | |
| | C2601 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2602 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2603 | NEA71EM-475X | E.CAPACITOR. | | |
| | C2604 | NEA71EM-475X | E.CAPACITOR. | | |
| | D 401 | DAN202K-X | D.TRANSISTOR | | |
| | D 403 | DAN202K-X | D.TRANSISTOR | | |
| | D 405 | DAN202K-X | D.TRANSISTOR | | |
| | D 406 | DAP202K-X | D.TR. C.M | | |
| | IC151 | BU4066BCF-X | IC | INPUT SELECT | |
| | IC153 | M62446FP-X | IC | E.V0LUME | |
| | IC158 | NJM4580M-X | IC | L/R OUT | |
| | IC159 | NJM4580M-X | IC | SL/SR OUT | |
| | IC160 | NJM4580M-X | IC | C/LFE OUT | |
| | IC401 | AK4527BVQP | IC | CODEC | |
| | IC402 | MM1613DN-X | IC | A3.3V REG | |
| | IC403 | TC9446F-025 | IC | DSP | |
| | IC404 | W24L010AJ-12-X | IC | SRAM | |
| | IC406 | UPD784215AGC167 | IC(MICRO C ROM) | DSP MICOM | |
| | IC407 | MM1563DF-X | IC | D3.3V REG | |
| | IC408 | TC74HC00AF-W | IC | | |
| | IC409 | GP1FA351RZ | OPT RECEIVER | RECIEVER | |
| | IC510 | BA15218F-XE | IC | AUX IN | |
| | IC511 | BA15218F-XE | IC | AUX IN | |
| | IC531 | BA15218F-XE | IC | L/R OUT | |
| | IC561 | BA15218F-XE | IC | SL/SR OUT | |
| | IC581 | BA15218F-XE | IC | C/LFE OUT | |
| | IC591 | BA15218F-XE | IC | C/LFE OUT | |
| | J1101 | QNN0385-001 | PIN JACK | AUX IN | |
| | J1103 | QND0079-001 | DIN CONNECTOR | SYSTEM CONECT | |
| | K 401 | NQR0319-001X | F.BEADS C.M | | |
| | LC401 | NQR0321-001X | EMI FILTER C.M | | |
| | Q 401 | KRA104S-X | DIGITAL.TR | | |
| | Q 402 | KRC107S-X | DIGITAL.TR | | |
| | Q 403 | KRC107S-X | DIGITAL.TR | | |
| | Q1131 | IMX9-W | TRANSISTOR | | |
| | Q1133 | IMX9-W | TRANSISTOR | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | Q1135 | IMX9-W | TRANSISTOR | | |
| | Q1137 | 2SD2114K/VW/-X | CHIP TRANSISTOR | | |
| | Q1251 | KRA104S-X | DIGITAL.TR | | |
| | Q1252 | KRA104S-X | DIGITAL.TR | | |
| | Q2501 | KRA104S-X | DIGITAL.TR | | |
| | Q2502 | KRC107S-X | DIGITAL.TR | | |
| | Q2521 | IMX9-W | TRANSISTOR | | |
| | Q2561 | IMX9-W | TRANSISTOR | | |
| | Q2581 | IMX9-W | TRANSISTOR | | |
| | R 403 | NRSA63J-221X | MG RESISTOR | | |
| | R 404 | NRSA63J-221X | MG RESISTOR | | |
| | R 405 | NRSA63J-221X | MG RESISTOR | | |
| | R 406 | NRSA63J-221X | MG RESISTOR | | |
| | R 407 | NRSA63J-221X | MG RESISTOR | | |
| | R 408 | NRSA63J-221X | MG RESISTOR | | |
| | R 415 | NRSA63J-221X | MG RESISTOR | | |
| | R 418 | NRSA63J-101X | MG RESISTOR | | |
| | R 419 | NRSA63J-103X | MG RESISTOR | | |
| | R 420 | NRSA63J-221X | MG RESISTOR | | |
| | R 423 | NRSA63F-102X | MG RESISTOR | | |
| | R 424 | NRSA63J-153X | MG RESISTOR | | |
| | R 425 | NRSA63F-102X | MG RESISTOR | | |
| | R 426 | NRSA63J-103X | MG RESISTOR | | |
| | R 427 | NRSA63J-103X | MG RESISTOR | | |
| | R 428 | NRSA63J-472X | MG RESISTOR | | |
| | R 429 | NRSA63J-101X | MG RESISTOR | | |
| | R 430 | NRSA63J-103X | MG RESISTOR | | |
| | R 431 | NRSA63J-225X | MG RESISTOR | | |
| | R 432 | NRSA63J-472X | MG RESISTOR | | |
| | R 435 | NRSA63J-103X | MG RESISTOR | | |
| | R 438 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 441 | NRSA63J-221X | MG RESISTOR | | |
| | R 443 | NRSA63J-221X | MG RESISTOR | | |
| | R 444 | NRSA63J-221X | MG RESISTOR | | |
| | R 445 | NRSA63J-221X | MG RESISTOR | | |
| | R 446 | NRSA63J-221X | MG RESISTOR | | |
| | R 447 | NRSA63J-221X | MG RESISTOR | | |
| | R 448 | NRSA63J-221X | MG RESISTOR | | |
| | R 449 | NRSA63J-221X | MG RESISTOR | | |
| | R 450 | NRSA63J-221X | MG RESISTOR | | |
| | R 451 | NRSA63J-103X | MG RESISTOR | | |
| | R 452 | NRSA63J-432X | MG RESISTOR | | |
| | R 453 | NRSA63J-432X | MG RESISTOR | | |
| | R 454 | NRSA63J-432X | MG RESISTOR | | |
| | R 455 | NRSA63J-822X | MG RESISTOR | | |
| | R 456 | NRSA63J-822X | MG RESISTOR | | |
| | R 457 | NRSA63J-822X | MG RESISTOR | | |
| | R 458 | NRSA63J-103X | MG RESISTOR | | |
| | R 459 | NRSA63J-102X | MG RESISTOR | | |
| | R 461 | NRSA63J-432X | MG RESISTOR | | |
| | R 462 | NRSA63J-822X | MG RESISTOR | | |
| | R 463 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 464 | NRSA63J-103X | MG RESISTOR | | |
| | R 465 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 466 | NRSA63J-103X | MG RESISTOR | | |
| | R 467 | NRSA63J-103X | MG RESISTOR | | |
| | R 468 | NRSA63J-103X | MG RESISTOR | | |
| | R 471 | NRSA63J-102X | MG RESISTOR | | |
| | R 472 | NRSA63J-102X | MG RESISTOR | | |
| | R 473 | NRSA63J-102X | MG RESISTOR | | |
| | R 474 | NRSA63J-102X | MG RESISTOR | | |
| | R 475 | NRSA63J-102X | MG RESISTOR | | |
| | R 476 | NRSA63J-102X | MG RESISTOR | | |

■ **Electrical parts list (DSP/Audio board)** **Block No. 03**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R 481 | NRSA63J-222X | MG RESISTOR | | |
| | R 482 | NRSA63J-103X | MG RESISTOR | | |
| | R 483 | NRSA63J-105X | MG RESISTOR | | |
| | R 491 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 492 | NRSA63J-0R0X | MG RESISTOR | | |
| | R1101 | NRSA63J-471X | MG RESISTOR | | |
| | R1102 | NRSA63J-471X | MG RESISTOR | | |
| | R1103 | NRSA63J-564X | MG RESISTOR | | |
| | R1104 | NRSA63J-564X | MG RESISTOR | | |
| | R1121 | NRSA63J-103X | MG RESISTOR | | |
| | R1122 | NRSA63J-103X | MG RESISTOR | | |
| | R1123 | NRSA63J-103X | MG RESISTOR | | |
| | R1131 | NRSA63J-104X | MG RESISTOR | | |
| | R1132 | NRSA63J-104X | MG RESISTOR | | |
| | R1133 | NRSA63J-102X | MG RESISTOR | | |
| | R1134 | NRSA63J-102X | MG RESISTOR | | |
| | R1135 | NRSA63J-332X | MG RESISTOR | | |
| | R1136 | NRSA63J-332X | MG RESISTOR | | |
| | R1137 | NRSA63J-104X | MG RESISTOR | | |
| | R1138 | NRSA63J-104X | MG RESISTOR | | |
| | R1139 | NRSA63J-104X | MG RESISTOR | | |
| | R1140 | NRSA63J-104X | MG RESISTOR | | |
| | R1141 | NRSA63J-102X | MG RESISTOR | | |
| | R1142 | NRSA63J-102X | MG RESISTOR | | |
| | R1143 | NRSA63J-332X | MG RESISTOR | | |
| | R1144 | NRSA63J-332X | MG RESISTOR | | |
| | R1145 | NRSA63J-104X | MG RESISTOR | | |
| | R1146 | NRSA63J-104X | MG RESISTOR | | |
| | R1147 | NRSA63J-104X | MG RESISTOR | | |
| | R1148 | NRSA63J-104X | MG RESISTOR | | |
| | R1149 | NRSA63J-471X | MG RESISTOR | | |
| | R1150 | NRSA63J-102X | MG RESISTOR | | |
| | R1151 | NRSA63J-472X | MG RESISTOR | | |
| | R1152 | NRSA63J-332X | MG RESISTOR | | |
| | R1153 | NRSA63J-471X | MG RESISTOR | | |
| | R1154 | NRSA63J-472X | MG RESISTOR | | |
| | R1155 | NRSA63J-104X | MG RESISTOR | | |
| | R1156 | NRSA63J-104X | MG RESISTOR | | |
| | R1157 | NRSA63J-332X | MG RESISTOR | | |
| | R1158 | NRSA63J-104X | MG RESISTOR | | |
| | R1161 | NRSA63J-104X | MG RESISTOR | | |
| | R1162 | NRSA63J-104X | MG RESISTOR | | |
| | R1163 | NRSA63J-104X | MG RESISTOR | | |
| | R1164 | NRSA63J-104X | MG RESISTOR | | |
| | R1165 | NRSA63J-104X | MG RESISTOR | | |
| | R1166 | NRSA63J-104X | MG RESISTOR | | |
| | R1167 | NRSA63J-332X | MG RESISTOR | | |
| | R1168 | NRSA63J-332X | MG RESISTOR | | |
| | R1169 | NRSA63J-393X | MG RESISTOR | | |
| | R1170 | NRSA63J-393X | MG RESISTOR | | |
| | R1171 | NRSA63J-332X | MG RESISTOR | | |
| | R1172 | NRSA63J-332X | MG RESISTOR | | |
| | R1173 | NRSA63J-393X | MG RESISTOR | | |
| | R1174 | NRSA63J-393X | MG RESISTOR | | |
| | R1175 | NRSA63J-332X | MG RESISTOR | | |
| | R1176 | NRSA63J-393X | MG RESISTOR | | |
| | R1197 | NRSA63J-474X | MG RESISTOR | | |
| | R1201 | NRSA63J-124X | MG RESISTOR | | |
| | R1202 | NRSA63J-124X | MG RESISTOR | | |
| | R1251 | NRSA63J-223X | MG RESISTOR | | |
| | R1252 | NRSA63J-223X | MG RESISTOR | | |
| | R2501 | NRSA63J-103X | MG RESISTOR | | |
| | R2502 | NRSA63J-103X | MG RESISTOR | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R2503 | NRSA63J-513X | MG RESISTOR | | |
| | R2504 | NRSA63J-513X | MG RESISTOR | | |
| | R2507 | NRSA63J-103X | MG RESISTOR | | |
| | R2508 | NRSA63J-103X | MG RESISTOR | | |
| | R2509 | NRSA63J-103X | MG RESISTOR | | |
| | R2510 | NRSA63J-103X | MG RESISTOR | | |
| | R2513 | NRSA63J-103X | MG RESISTOR | | |
| | R2514 | NRSA63J-103X | MG RESISTOR | | |
| | R2515 | NRSA63J-103X | MG RESISTOR | | |
| | R2516 | NRSA63J-103X | MG RESISTOR | | |
| | R2517 | NRSA63J-102X | MG RESISTOR | | |
| | R2518 | NRSA63J-102X | MG RESISTOR | | |
| | R2519 | NRSA63J-102X | MG RESISTOR | | |
| | R2520 | NRSA63J-102X | MG RESISTOR | | |
| | R2525 | NRSA63J-102X | MG RESISTOR | | |
| | R2526 | NRSA63J-102X | MG RESISTOR | | |
| | R2527 | NRSA63J-104X | MG RESISTOR | | |
| | R2528 | NRSA63J-104X | MG RESISTOR | | |
| | R2529 | NRSA63J-103X | MG RESISTOR | | |
| | R2530 | NRSA63J-103X | MG RESISTOR | | |
| | R2531 | NRSA63J-104X | MG RESISTOR | | |
| | R2532 | NRSA63J-104X | MG RESISTOR | | |
| | R2533 | NRSA63J-223X | MG RESISTOR | | |
| | R2534 | NRSA63J-223X | MG RESISTOR | | |
| | R2535 | NRSA63J-563X | MG RESISTOR | | |
| | R2536 | NRSA63J-563X | MG RESISTOR | | |
| | R2537 | NRSA63J-104X | MG RESISTOR | | |
| | R2538 | NRSA63J-104X | MG RESISTOR | | |
| | R2561 | NRSA63J-104X | MG RESISTOR | | |
| | R2562 | NRSA63J-104X | MG RESISTOR | | |
| | R2563 | NRSA63J-103X | MG RESISTOR | | |
| | R2564 | NRSA63J-103X | MG RESISTOR | | |
| | R2565 | NRSA63J-392X | MG RESISTOR | | |
| | R2566 | NRSA63J-392X | MG RESISTOR | | |
| | R2567 | NRSA63J-103X | MG RESISTOR | | |
| | R2568 | NRSA63J-103X | MG RESISTOR | | |
| | R2575 | NRSA63J-102X | MG RESISTOR | | |
| | R2576 | NRSA63J-102X | MG RESISTOR | | |
| | R2577 | NRSA63J-104X | MG RESISTOR | | |
| | R2578 | NRSA63J-104X | MG RESISTOR | | |
| | R2579 | NRSA63J-104X | MG RESISTOR | | |
| | R2580 | NRSA63J-104X | MG RESISTOR | | |
| | R2581 | NRSA63J-104X | MG RESISTOR | | |
| | R2582 | NRSA63J-104X | MG RESISTOR | | |
| | R2583 | NRSA63J-103X | MG RESISTOR | | |
| | R2584 | NRSA63J-124X | MG RESISTOR | | |
| | R2585 | NRSA63J-392X | MG RESISTOR | | |
| | R2586 | NRSA63J-123X | MG RESISTOR | | |
| | R2587 | NRSA63J-103X | MG RESISTOR | | |
| | R2588 | NRSA63J-103X | MG RESISTOR | | |
| | R2590 | NRSA63J-333X | MG RESISTOR | | |
| | R2592 | NRSA63J-333X | MG RESISTOR | | |
| | R2594 | NRSA63J-333X | MG RESISTOR | | |
| | R2595 | NRSA63J-102X | MG RESISTOR | | |
| | R2596 | NRSA63J-102X | MG RESISTOR | | |
| | R2597 | NRSA63J-104X | MG RESISTOR | | |
| | R2598 | NRSA63J-104X | MG RESISTOR | | |
| | R2599 | NRSA63J-104X | MG RESISTOR | | |
| | R2600 | NRSA63J-104X | MG RESISTOR | | |
| | X 401 | NAX0385-001X | CRYSTAL | 22.5792MHZ | |
| | X 402 | NAX0275-001X | 1COSCIALLATOR | 6.14MHZ | |

■ **Electrical parts list (DVD servo board)** **Block No. 04**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 105 | NEA70JM-476X | E.CAPACITOR | | |
| | C 106 | NEA70JM-476X | E.CAPACITOR | | |
| | C 109 | NCB31CK-104X | C CAPACITOR | | |
| | C 110 | NCS31HJ-221X | C.CAPA. C.M | | |
| | C 111 | NCB31CK-104X | C CAPACITOR | | |
| | C 112 | NCB31CK-104X | C CAPACITOR | | |
| | C 113 | NEA70JM-226X | E CAPACITOR | | |
| | C 115 | NCB31CK-104X | C CAPACITOR | | |
| | C 116 | NCB31CK-104X | C CAPACITOR | | |
| | C 117 | NCB31CK-473X | C CAPACITOR | | |
| | C 118 | NCB31CK-273X | C CAPACITOR | | |
| | C 119 | NCB31HK-561X | C CAPACITOR | | |
| | C 120 | NCB31HK-561X | C CAPACITOR | | |
| | C 121 | NCB31CK-104X | C CAPACITOR | | |
| | C 122 | NCS31HJ-120X | C.CAPA. C.M | | |
| | C 123 | NCB31CK-104X | C CAPACITOR | | |
| | C 124 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C 125 | NCB31HK-271X | C CAPACITOR | | |
| | C 126 | NCB31CK-104X | C CAPACITOR | | |
| | C 127 | NCB31CK-104X | C CAPACITOR | | |
| | C 128 | NCB31CK-104X | C CAPACITOR | | |
| | C 129 | NCB31HK-472X | C CAPACITOR | | |
| | C 135 | NEA70JM-476X | E.CAPACITOR | | |
| | C 137 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 138 | NCB31CK-104X | C CAPACITOR | | |
| | C 139 | NCB31CK-104X | C CAPACITOR | | |
| | C 141 | NCB31CK-104X | C CAPACITOR | | |
| | C 142 | NCB31CK-104X | C CAPACITOR | | |
| | C 143 | NCB31CK-104X | C CAPACITOR | | |
| | C 144 | NCB31CK-103X | C CAPACITOR | | |
| | C 146 | NCB31CK-104X | C CAPACITOR | | |
| | C 201 | NEA70JM-226X | E CAPACITOR | | |
| | C 203 | NCB31CK-104X | C CAPACITOR | | |
| | C 204 | NCB31CK-104X | C CAPACITOR | | |
| | C 205 | NCS31HJ-121X | C CAPACITOR | | |
| | C 207 | NCB31HK-391X | C CAPACITOR | | |
| | C 208 | NCB31HK-391X | C CAPACITOR | | |
| | C 211 | NCB31HK-223X | C CAPACITOR | | |
| | C 212 | NCB31CK-103X | C CAPACITOR | | |
| | C 215 | NCB31CK-104X | C CAPACITOR | | |
| | C 217 | NCB31CK-104X | C CAPACITOR | | |
| | C 251 | NCB31CK-104X | C CAPACITOR | | |
| | C 252 | NEA71AM-336X | E CAPACITOR | | |
| | C 253 | NCB31CK-104X | C CAPACITOR | | |
| | C 255 | NCB31CK-153X | C CAPACITOR | | |
| | C 256 | NCB31CK-104X | C CAPACITOR | | |
| | C 257 | NCB31CK-104X | C CAPACITOR | | |
| | C 258 | NCB31CK-104X | C CAPACITOR | | |
| | C 259 | NCB31CK-104X | C CAPACITOR | | |
| | C 260 | NCB31CK-104X | C CAPACITOR | | |
| | C 261 | NCB31CK-104X | C CAPACITOR | | |
| | C 262 | NCB31CK-104X | C CAPACITOR | | |
| | C 263 | NCB31CK-104X | C CAPACITOR | | |
| | C 264 | NCB31CK-103X | C CAPACITOR | | |
| | C 301 | NCB31CK-104X | C CAPACITOR | | |
| | C 302 | NCB31CK-104X | C CAPACITOR | | |
| | C 303 | NCB31CK-104X | C CAPACITOR | | |
| | C 304 | NEA70GM-107X | E CAPACITOR | | |
| | C 306 | NEA70GM-107X | E CAPACITOR | | |
| | C 308 | NEA70GM-107X | E CAPACITOR | | |
| | C 310 | NCB31CK-104X | C CAPACITOR | | |
| | C 311 | NCB31HK-561X | C CAPACITOR | | |
| | C 312 | NCB31HK-561X | C CAPACITOR | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 313 | NCB31HK-561X | C CAPACITOR | | |
| | C 314 | NCB31HK-331X | C CAPACITOR | | |
| | C 315 | NCB31HK-471X | C CAPACITOR | | |
| | C 316 | NCB31HK-271X | C CAPACITOR | | |
| | C 317 | NCS31HJ-121X | C CAPACITOR | | |
| | C 318 | NCB31CK-104X | C CAPACITOR | | |
| | C 319 | NCB31HK-102X | C CAPACITOR | | |
| | C 320 | NCB31HK-102X | C CAPACITOR | | |
| | C 321 | NCB31HK-102X | C CAPACITOR | | |
| | C 322 | NCB31HK-562X | C CAPACITOR | | |
| | C 323 | NCB31HK-102X | C CAPACITOR | | |
| | C 324 | NCB31CK-104X | C CAPACITOR | | |
| | C 325 | NCS31HJ-470X | C.CAPA. C.M | | |
| | C 326 | NCB31CK-183X | C CAPACITOR | | |
| | C 327 | NCB31HK-102X | C CAPACITOR | | |
| | C 328 | NCB31CK-104X | C CAPACITOR | | |
| | C 329 | NCB31CK-103X | C CAPACITOR | | |
| | C 330 | NCB31CK-104X | C CAPACITOR | | |
| | C 331 | NCB31CK-103X | C CAPACITOR | | |
| | C 332 | NCB21CK-105X | C CAPACITOR | | |
| | C 333 | NCB31CK-104X | C CAPACITOR | | |
| | C 334 | NCB31CK-104X | C CAPACITOR | | |
| | C 337 | NCB31CK-104X | C CAPACITOR | | |
| | C 338 | NCB31CK-104X | C CAPACITOR | | |
| | C 339 | NCB31CK-104X | C CAPACITOR | | |
| | C 340 | NCB31CK-104X | C CAPACITOR | | |
| | C 341 | NCB31CK-104X | C CAPACITOR | | |
| | C 342 | NCB31CK-104X | C CAPACITOR | | |
| | C 343 | NCB31CK-104X | C CAPACITOR | | |
| | C 344 | NCB31CK-104X | C CAPACITOR | | |
| | C 345 | NCB31CK-104X | C CAPACITOR | | |
| | C 346 | NCB31CK-104X | C CAPACITOR | | |
| | C 347 | NCB31CK-104X | C CAPACITOR | | |
| | C 348 | NCB31CK-104X | C CAPACITOR | | |
| | C 349 | NCB31CK-104X | C CAPACITOR | | |
| | C 350 | NCB31CK-104X | C CAPACITOR | | |
| | C 401 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 402 | NCB31CK-104X | C CAPACITOR | | |
| | C 403 | NCB31CK-104X | C CAPACITOR | | |
| | C 404 | NCB31CK-104X | C CAPACITOR | | |
| | C 405 | NCB31CK-104X | C CAPACITOR | | |
| | C 406 | NCB31CK-104X | C CAPACITOR | | |
| | C 407 | NCB31CK-104X | C CAPACITOR | | |
| | C 450 | NCB31CK-104X | C CAPACITOR | | |
| | C 501 | NCB31CK-104X | C CAPACITOR | | |
| | C 504 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 505 | NCB31CK-104X | C CAPACITOR | | |
| | C 507 | NCS31HJ-3R0X | C CAPACITOR | | |
| | C 508 | NCB31CK-104X | C CAPACITOR | | |
| | C 511 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 512 | NCB31CK-104X | C CAPACITOR | | |
| | C 514 | NCB31CK-104X | C CAPACITOR | | |
| | C 515 | NCB31CK-104X | C CAPACITOR | | |
| | C 516 | NCB31CK-104X | C CAPACITOR | | |
| | C 517 | NCB31CK-104X | C CAPACITOR | | |
| | C 518 | NCB31CK-104X | C CAPACITOR | | |
| | C 519 | NCB31CK-104X | C CAPACITOR | | |
| | C 520 | NCB31CK-104X | C CAPACITOR | | |
| | C 523 | NCB31CK-104X | C CAPACITOR | | |
| | C 524 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 527 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 528 | NCB31CK-104X | C CAPACITOR | | |
| | C 529 | NCB31CK-104X | C CAPACITOR | | |

■ **Electrical parts list (DVD servo board)** **Block No. 04**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 531 | NCB31CK-104X | C CAPACITOR | | |
| | C 532 | NCB31CK-104X | C CAPACITOR | | |
| | C 533 | NCB31CK-104X | C CAPACITOR | | |
| | C 534 | NCB31CK-104X | C CAPACITOR | | |
| | C 535 | NCB31CK-104X | C CAPACITOR | | |
| | C 536 | NCB31CK-104X | C CAPACITOR | | |
| | C 539 | NCB31CK-104X | C CAPACITOR | | |
| | C 540 | NCB31CK-104X | C CAPACITOR | | |
| | C 541 | NCB31CK-104X | C CAPACITOR | | |
| | C 542 | NCB31CK-104X | C CAPACITOR | | |
| | C 543 | NCB31CK-104X | C CAPACITOR | | |
| | C 544 | NCB31CK-104X | C CAPACITOR | | |
| | C 545 | NCB31CK-104X | C CAPACITOR | | |
| | C 547 | NCB31CK-104X | C CAPACITOR | | |
| | C 548 | NCB31CK-104X | C CAPACITOR | | |
| | C 549 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 550 | NCB31CK-104X | C CAPACITOR | | |
| | C 554 | NCB31CK-104X | C CAPACITOR | | |
| | C 555 | NCB31CK-104X | C CAPACITOR | | |
| | C 557 | NCB31CK-104X | C CAPACITOR | | |
| | C 558 | NCB11CK-105X | C CAPACITOR | | |
| | C 569 | NCB31CK-104X | C CAPACITOR | | |
| | C 571 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 572 | NCB31CK-104X | C CAPACITOR | | |
| | C 573 | NEA70GM-227X | E.CAPA, C.M | | |
| | C 578 | NCB31CK-104X | C CAPACITOR | | |
| | C 580 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 581 | NEA70GM-227X | E.CAPA, C.M | | |
| | C 582 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 601 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 602 | NEA70GM-476X | E.CAPA. C.M. | | |
| | C 618 | NCB31CK-104X | C CAPACITOR | | |
| | C 619 | NCB31CK-104X | C CAPACITOR | | |
| | C 902 | NCB31CK-104X | C CAPACITOR | | |
| | C 904 | NCB31CK-104X | C CAPACITOR | | |
| | C 906 | NCB31CK-104X | C CAPACITOR | | |
| | C 908 | NCB31CK-104X | C CAPACITOR | | |
| | C 992 | NCB31CK-104X | C CAPACITOR | | |
| | C 993 | NCB31CK-104X | C CAPACITOR | | |
| | C 994 | NCB31CK-104X | C CAPACITOR | | |
| | C 995 | NCB31CK-104X | C CAPACITOR | | |
| | C 996 | NCB31CK-104X | C CAPACITOR | | |
| | C 997 | NCB31CK-104X | C CAPACITOR | | |
| | C 998 | NCB31CK-104X | C CAPACITOR | | |
| | CN101 | QGF0523F1-30W | FFC/FPC CONNE | PU | |
| | CN201 | QGF1016F2-15W | CONNECTOR | SP&STP | |
| | CN202 | QGF1016F2-07W | CONNECTOR | LOADER | |
| | CN502 | QGB2027L1-26X | CONNECTOR | SYSTEM | |
| | CN503 | QGB2027L1-26X | CONNECTOR | VIDEO | |
| | D 101 | RB521S-30-X | SB DIODE | | |
| | D 202 | 1SS355-X | DIODE C.M | | |
| | IC101 | AN8703FH-V | IC | | |
| | IC201 | BA5983FM-X | IC | | |
| | IC251 | BA6664FM-X | LSI | | |
| | IC301 | MN103S26EGA | IC | | |
| | IC401 | MN102L62GLF3 | IC | | |
| | IC451 | S-93C66AFJ-X | IC | | |
| | IC501 | NDV8601VWA-BB | IC | | |
| | IC502 | CY24203SC-X | IC | | |
| | IC505 | K4S643232E-TC60 | IC | | |
| | IC509 | SST39VF160-7CEK | IC (FLASH) | | |
| | IC510 | AK93C65AF-X | IC C.M | | |
| | IC511 | LM1117MP1.8-X | IC | | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | IC512 | 74LCX373MTC-X | IC(DIGITAL) | | |
| | IC513 | 74LCX373MTC-X | IC(DIGITAL) | | |
| | IC521 | MM74HCT32MTC-X | IC | | |
| | IC522 | 74LCX32MTC-X | IC(DIGITAL) | | |
| | IC523 | NC7SZ125P5-X | IC(DIGITAL) | | |
| | K 101 | NQR0007-002X | FERRITE BEADS | | |
| | K 301 | NQR0007-002X | FERRITE BEADS | | |
| | K 302 | NQR0007-002X | FERRITE BEADS | | |
| | K 303 | NQR0007-002X | FERRITE BEADS | | |
| | K 304 | NQR0007-002X | FERRITE BEADS | | |
| | K 401 | NQR0007-002X | FERRITE BEADS | | |
| | K 501 | NQR0007-002X | FERRITE BEADS | | |
| | K 502 | NQR0007-002X | FERRITE BEADS | | |
| | K 504 | NQR0007-002X | FERRITE BEADS | | |
| | K 505 | NQR0007-002X | FERRITE BEADS | | |
| | K 507 | NQR0007-002X | FERRITE BEADS | | |
| | K 508 | NQR0007-002X | FERRITE BEADS | | |
| | K 509 | NQR0007-002X | FERRITE BEADS | | |
| | K 510 | NQR0007-002X | FERRITE BEADS | | |
| | K 513 | NQR0007-002X | FERRITE BEADS | | |
| | K 519 | NQR0007-002X | FERRITE BEADS | | |
| | K 520 | NQR0007-002X | FERRITE BEADS | | |
| | K 556 | NQR0129-002X | FERRITE BEADS | | |
| | K 557 | NQR0129-002X | FERRITE BEADS | | |
| | K 558 | NQR0129-002X | FERRITE BEADS | | |
| | K 559 | NQR0129-002X | FERRITE BEADS | | |
| | L 501 | NQL044K-100X | INDUCTOR | | |
| | Q 101 | KTA1001/Y/-X | TRANSISTOR | | |
| | Q 102 | KTA1001/Y/-X | TRANSISTOR | | |
| | Q 103 | DTA144EE-X | DIGI TRANSISTOR | | |
| | Q 501 | 2SB1424/QR/-W | TRANSISTOR | | |
| | Q 502 | 2SC2412K/RS/-X | CHIP TRANSISTOR | | |
| | R 101 | NRSA63J-333X | MG RESISTOR | | |
| | R 102 | NRSA63J-223X | MG RESISTOR | | |
| | R 103 | NRSA63J-223X | MG RESISTOR | | |
| | R 104 | NRS125J-270X | MG RESISTOR | | |
| | R 105 | NRS125J-270X | MG RESISTOR | | |
| | R 106 | NRSA63J-273X | MG RESISTOR | | |
| | R 107 | NRSA63J-273X | MG RESISTOR | | |
| | R 108 | NRSA63J-222X | MG RESISTOR | | |
| | R 109 | NRSA63J-182X | MG RESISTOR | | |
| | R 110 | NRSA63J-333X | MG RESISTOR | | |
| | R 111 | NRVA63D-243X | RES. C.M | | |
| | R 112 | NRSA63J-822X | MG RESISTOR | | |
| | R 113 | NRSA63J-103X | MG RESISTOR | | |
| | R 114 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 115 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 116 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 117 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 119 | NRSA63J-2R2X | MG RESISTOR | | |
| | R 120 | NRSA63J-2R2X | MG RESISTOR | | |
| | R 125 | NRSA63J-105X | MG RESISTOR | | |
| | R 126 | NRSA63J-105X | MG RESISTOR | | |
| | R 127 | NRSA63J-222X | MG RESISTOR | | |
| | R 128 | NRS125J-1R0X | MG RESISTOR | | |
| | R 129 | NRS125J-1R0X | MG RESISTOR | | |
| | R 130 | NRSA63J-182X | MG RESISTOR | | |
| | R 201 | NRSA63J-470X | MG RESISTOR | | |
| | R 202 | NRS125J-1R0X | MG RESISTOR | | |
| | R 203 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 204 | NRSA63J-273X | MG RESISTOR | | |
| | R 205 | NRSA63J-273X | MG RESISTOR | | |
| | R 206 | NRSA63J-303X | MG RESISTOR | | |

■ **Electrical parts list (DVD servo board)** **Block No. 04**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R 207 | NRSA63J-473X | MG RESISTOR | | |
| | R 208 | NRSA63J-223X | MG RESISTOR | | |
| | R 209 | NRSA63J-223X | MG RESISTOR | | |
| | R 210 | NRSA63J-222X | MG RESISTOR | | |
| | R 211 | NRSA63J-222X | MG RESISTOR | | |
| | R 212 | NRSA63J-103X | MG RESISTOR | | |
| | R 213 | NRSA63J-103X | MG RESISTOR | | |
| | R 214 | NRSA63J-103X | MG RESISTOR | | |
| | R 215 | NRSA63J-103X | MG RESISTOR | | |
| | R 216 | NRSA63J-912X | MG RESISTOR | | |
| | R 217 | NRSA63J-181X | MG RESISTOR | | |
| | R 218 | NRSA63J-221X | MG RESISTOR | | |
| | R 219 | NRSA63J-183X | MG RESISTOR | | |
| | R 220 | NRSA63J-243X | MG RESISTOR | | |
| | R 221 | NRSA63J-682X | MG RESISTOR | | |
| | R 222 | NRSA63J-103X | MG RESISTOR | | |
| | R 223 | NRSA63J-912X | MG RESISTOR | | |
| | R 224 | NRSA63J-103X | MG RESISTOR | | |
| | R 228 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 229 | NRSA63J-332X | MG RESISTOR | | |
| | R 251 | NRS125J-R47X | MG RESISTOR | | |
| | R 252 | NRSA63J-2R2X | MG RESISTOR | | |
| | R 253 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 254 | NRSA63J-203X | MG RESISTOR | | |
| | R 255 | NRSA63J-103X | MG RESISTOR | | |
| | R 256 | NRSA63J-470X | MG RESISTOR | | |
| | R 258 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 259 | NRSA63J-103X | MG RESISTOR | | |
| | R 301 | NRSA63J-473X | MG RESISTOR | | |
| | R 302 | NRSA63J-473X | MG RESISTOR | | |
| | R 303 | NRSA63J-473X | MG RESISTOR | | |
| | R 304 | NRSA63J-473X | MG RESISTOR | | |
| | R 305 | NRSA63J-473X | MG RESISTOR | | |
| | R 306 | NRSA63J-473X | MG RESISTOR | | |
| | R 307 | NRSA63J-473X | MG RESISTOR | | |
| | R 308 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 309 | NRSA63J-473X | MG RESISTOR | | |
| | R 313 | NRSA63J-473X | MG RESISTOR | | |
| | R 317 | NRSA63J-473X | MG RESISTOR | | |
| | R 319 | NRSA63J-473X | MG RESISTOR | | |
| | R 321 | NRSA63J-473X | MG RESISTOR | | |
| | R 323 | NRSA63J-473X | MG RESISTOR | | |
| | R 324 | NRSA63J-473X | MG RESISTOR | | |
| | R 325 | NRSA63J-123X | MG RESISTOR | | |
| | R 326 | NRSA63J-473X | MG RESISTOR | | |
| | R 327 | NRSA63J-105X | MG RESISTOR | | |
| | R 328 | NRSA63J-153X | MG RESISTOR | | |
| | R 329 | NRSA63J-473X | MG RESISTOR | | |
| | R 330 | NRSA63J-473X | MG RESISTOR | | |
| | R 331 | NRSA63J-473X | MG RESISTOR | | |
| | R 332 | NRSA63J-102X | MG RESISTOR | | |
| | R 333 | NRSA63J-183X | MG RESISTOR | | |
| | R 334 | NRSA63J-102X | MG RESISTOR | | |
| | R 336 | NRSA63J-273X | MG RESISTOR | | |
| | R 337 | NRSA63J-273X | MG RESISTOR | | |
| | R 338 | NRSA63J-472X | MG RESISTOR | | |
| | R 339 | NRSA63J-472X | MG RESISTOR | | |
| | R 340 | NRSA63J-103X | MG RESISTOR | | |
| | R 341 | NRSA63J-562X | MG RESISTOR | | |
| | R 402 | NRSA63J-472X | MG RESISTOR | | |
| | R 411 | NRSA63J-472X | MG RESISTOR | | |
| | R 413 | NRSA63J-472X | MG RESISTOR | | |
| | R 414 | NRSA63J-472X | MG RESISTOR | | |
| | R 421 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 422 | NRSA63J-472X | MG RESISTOR | | |
| | R 423 | NRSA63J-472X | MG RESISTOR | | |
| | R 424 | NRSA63J-472X | MG RESISTOR | | |
| | R 427 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 428 | NRSA63J-472X | MG RESISTOR | | |
| | R 501 | NRSA63J-470X | MG RESISTOR | | |
| | R 504 | NRSA63J-103X | MG RESISTOR | | |
| | R 509 | NRSA63J-103X | MG RESISTOR | | |
| | R 510 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 511 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 512 | NRSA63J-332X | MG RESISTOR | | |
| | R 513 | NRSA63J-330X | MG RESISTOR | | |
| | R 521 | NRSA63J-103X | MG RESISTOR | | |
| | R 531 | NRSA63J-562X | MG RESISTOR | | |
| | R 532 | NRSA63J-392X | MG RESISTOR | | |
| | R 533 | NRSA63J-102X | MG RESISTOR | | |
| | R 534 | NRSA63J-561X | MG RESISTOR | | |
| | R 535 | NRSA63J-333X | MG RESISTOR | | |
| | R 536 | NRSA63J-102X | MG RESISTOR | | |
| | R 541 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 543 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 544 | NRSA63J-471X | MG RESISTOR | | |
| | R 547 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 551 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 552 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 553 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 565 | NRVA63D-622X | CMF RESISTOR | | |
| | R 566 | NRVA63D-132X | MG.RESI C.M | | |
| | R 570 | NRSA63J-100X | MG RESISTOR | | |
| | R 573 | NRSA63J-162X | MG RESISTOR | | |
| | R 574 | NRSA63J-162X | MG RESISTOR | | |
| | R 583 | NRSA63J-471X | MG RESISTOR | | |
| | R 584 | NRSA63J-332X | MG RESISTOR | | |
| | R 608 | NRSA63J-103X | MG RESISTOR | | |
| | R 655 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 738 | NRSA63J-152X | MG RESISTOR | | |
| | R 739 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 740 | NRSA63J-0R0X | MG RESISTOR | | |
| | R 991 | NRSA63J-220X | MG RESISTOR | | |
| | X 571 | NAX0513-001X | CRYSTAL | | |

■ **Electrical parts list (DVD loading switch board)** **Block No. 05**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | CN101 | QGA1501F2-04W | CONNECTER | | |
| | CN102 | QGF1016F2-07W | CONNECTOR | | |
| | CN103 | QGA1501F2-02W | CONNECTOR | | |
| | CN104 | QGA1501F2-04W | CONNECTER | | |
| | D 101 | GL100MN0MP1/M/X | PHOTO DIODE | | |
| | Q 101 | PT100MF0MP1-X | PHOTO TR | | |
| | R 101 | NRSA63J-181X | MG RESISTOR | | |
| | S 101 | NSW0174-001X | PUSH SW | | |
| | S 102 | NSW0174-001X | PUSH SW | | |

■ **Electrical parts list (SP-THV70 Main board)** **Block No. 06**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 202 | QETN1HM-105Z | E CAPACITOR | 1.0MF 20% 50V | |
| | C 203 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 204 | QFVF1HJ-184Z | MF CAPACITOR | .18MF 5% 50V | |
| | C 205 | QFN31HJ-393Z | M CAPACITOR | .039MF 5% 50V | |
| | C 206 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 207 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 208 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 209 | QFN31HJ-471Z | M CAPACITOR | 470PF 5% 50V | |
| | C 210 | QTE1H06-475Z | E CAPACITOR | | |
| | C 211 | QETN1HM-106Z | E CAPACITOR | 10MF 20% 50V | |
| | C 212 | QETN1HM-107Z | E CAPACITOR | 100MF 20% 50V | |
| | C 213 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 214 | QETN1HM-476Z | E CAPACITOR | 47MF 20% 50V | |
| | C 215 | QCS31HJ-3R0Z | C CAPACITOR | 3.0PF 5% 50V | |
| | C 216 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 217 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 218 | QFVF1HJ-224Z | MF CAPACITOR | .22MF 5% 50V | |
| | C 219 | QFVF1HJ-224Z | MF CAPACITOR | .22MF 5% 50V | |
| | C 223 | QCSB1HJ-100Y | C CAPACITOR | 10PF 5% 50V | |
| | C 225 | QETN2AM-226Z | E CAPA I/M | 22MF 20% 100V | |
| | C 226 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 227 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 228 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 229 | QFN31HJ-223Z | M CAPACITOR | .022MF 5% 50V | |
| | C 230 | QFN31HJ-223Z | M CAPACITOR | .022MF 5% 50V | |
| | C 231 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 232 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 233 | QFV61HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 300 | QFN31HJ-471Z | M CAPACITOR | 470PF 5% 50V | |
| | C 301 | QETN1HM-225Z | E CAPACITOR | 2.2MF 20% 50V | |
| | C 302 | QCBB1HK-221Y | C CAPACITOR | 220PF 10% 50V | |
| | C 303 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 304 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 305 | QETN1HM-106Z | E CAPACITOR | 10MF 20% 50V | |
| | C 306 | QCSB1HK-3R3Y | C CAPACITOR | 3.3PF 10% 50V | |
| | C 307 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 308 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 309 | QETN1HM-106Z | E CAPACITOR | 10MF 20% 50V | |
| | C 310 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 311 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 312 | QCBB1HK-221Y | C CAPACITOR | 220PF 10% 50V | |
| | C 313 | QETN1HM-225Z | E CAPACITOR | 2.2MF 20% 50V | |
| | C 314 | QFN31HJ-471Z | M CAPACITOR | 470PF 5% 50V | |
| | C 315 | QCSB1HK-3R3Y | C CAPACITOR | 3.3PF 10% 50V | |
| | C 316 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 317 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 318 | QFN31HJ-471Z | M CAPACITOR | 470PF 5% 50V | |
| | C 319 | QTE1H06-475Z | E CAPACITOR | | |
| | C 320 | QCBB1HK-221Y | C CAPACITOR | 220PF 10% 50V | |
| | C 321 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 322 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 323 | QCSB1HK-3R3Y | C CAPACITOR | 3.3PF 10% 50V | |
| | C 324 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 325 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 326 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 327 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 328 | QCBB1HK-221Y | C CAPACITOR | 220PF 10% 50V | |
| | C 329 | QTE1H06-475Z | E CAPACITOR | | |
| | C 330 | QFN31HJ-471Z | M CAPACITOR | 470PF 5% 50V | |
| | C 331 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 332 | QCSB1HK-3R3Y | C CAPACITOR | 3.3PF 10% 50V | |
| | C 333 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 334 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 335 | QFN31HJ-471Z | M CAPACITOR | 470PF 5% 50V | |
| | C 336 | QTE1H06-475Z | E CAPACITOR | | |
| | C 337 | QCBB1HK-221Y | C CAPACITOR | 220PF 10% 50V | |
| | C 338 | QCSB1HK-3R3Y | C CAPACITOR | 3.3PF 10% 50V | |
| | C 339 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 340 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 350 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 351 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 352 | QFN31HJ-472Z | M CAPACITOR | 4700PF 5% 50V | |
| | C 353 | QFN31HJ-472Z | M CAPACITOR | 4700PF 5% 50V | |
| ⚠ | C 400 | QCZ9105-472 | C CAPACITOR | 4700PF | |
| | C 402 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 403 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 404 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 405 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 406 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 407 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 408 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 409 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 410 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 411 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 412 | QETN1HM-105Z | E CAPACITOR | 1.0MF 20% 50V | |
| | CN102 | QGB2510K2-06 | CONNECTOR | | |
| | CN103 | QGB2510K2-14 | CONNECTOR | | |
| | CN105 | QGB2510K2-20 | SOCKET | | |
| | CN106 | QGB2510K2-14 | CONNECTOR | | |
| ⚠ | CN107 | QGA7901C1-02 | CONNECTOR | | |
| ⚠ | CN108 | QGA7901C1-02 | CONNECTOR | | |
| | CN109 | QGA3901F2-04 | CONNECTOR | | |
| | CN110 | QGB2510K2-10 | CONNECTOR | | |
| | CN111 | QGB2510K2-12 | CONNECTOR | | |
| | D 202 | 1SS133-T2 | SI DIODE IM | | |
| | D 203 | 1SS133-T2 | SI DIODE IM | | |
| ⚠ | D 204 | 1N5402M-20 | DIODE | | |
| | D 205 | MTZJ15C-T2 | Z DIODE | | |
| | D 206 | MTZJ6.2B-T2 | ZENER DIODE | | |
| | D 207 | 1SS133-T2 | SI DIODE IM | | |
| | D 208 | SLR-325MG-T | LED I M | | |
| | D 209 | SLR-325MG-T | LED I M | | |
| | D 210 | 1SS133-T2 | SI DIODE IM | | |
| | D 211 | 1SS133-T2 | SI DIODE IM | | |
| | D 212 | MTZJ6.2B-T2 | ZENER DIODE | | |
| | D 214 | MTZJ15C-T2 | Z DIODE | | |
| ⚠ | D 215 | 1N5402M-20 | DIODE | | |
| | D 216 | 1SS133-T2 | SI DIODE IM | | |
| | D 217 | MTZJ6.2B-T2 | ZENER DIODE | | |
| | D 218 | 1SS133-T2 | SI DIODE IM | | |
| | D 219 | 1SS133-T2 | SI DIODE IM | | |
| | D 300 | 1SS133-T2 | SI DIODE IM | | |
| | D 301 | 1SS133-T2 | SI DIODE IM | | |
| | D 302 | 1SS133-T2 | SI DIODE IM | | |
| | D 303 | 1SS133-T2 | SI DIODE IM | | |
| | D 304 | 1SS133-T2 | SI DIODE IM | | |
| | D 400 | 1SS133-T2 | SI DIODE IM | | |
| | D 401 | 1SR35-400A-T5 | DIODE I/M | | |
| | IC104 | BA15218N | IC | | |
| ⚠ | IC105 | STK404-130 | IC | | |
| ⚠ | IC106 | STK402-030 | IC | | |
| ⚠ | IC107 | STK402-230 | IC | | |
| | IC201 | BA15218N | IC | | |
| | IC202 | BA15218N | IC | | |
| | J 101 | QNB0065-002 | SPK TERMINAL | | |
| | J 102 | QNB0070-002 | SPK TERMINAL | | |

■ **Electrical parts list (SP-THV70 Main board)** **Block No. 06**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | L 200 | QQLZ003-1R0 | INDUCTOR | | |
| | L 300 | QQLZ003-1R0 | INDUCTOR | | |
| | L 301 | QQLZ003-1R0 | INDUCTOR | | |
| | L 302 | QQLZ003-1R0 | INDUCTOR | | |
| | L 303 | QQLZ003-1R0 | INDUCTOR | | |
| | L 304 | QQLZ003-1R0 | INDUCTOR | | |
| | LC400 | QQR0797-002 | INDUCTOR | | |
| | LC401 | QQR0797-002 | INDUCTOR | | |
| | LC402 | QQLZ005-R45 | INDUCTOR | | |
| | LC403 | QQLZ005-R45 | INDUCTOR | | |
| | LC404 | QQLZ005-R45 | INDUCTOR | | |
| | MR200 | QRZ0197-R22 | C RESISTOR | 1/1W | |
| | Q 202 | 2SA1038S/SE/-T | TRANSISTOR | | |
| ⚠ | Q 204 | 2SK2937 | FET | | |
| | Q 205 | KRA111M-T | D.TR.I.M | | |
| | Q 206 | 2SC2389S/SE/-T | TRANSISTOR | | |
| | Q 207 | 2SA1038S/SE/-T | TRANSISTOR | | |
| ⚠ | Q 208 | 2SK2937 | FET | | |
| | Q 209 | 2SC2389S/SE/-T | TRANSISTOR | | |
| | Q 210 | 2SK373/OY/-T | FET I/M | | |
| | Q 211 | KRC111M-T | TR I/M | | |
| | Q 300 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 301 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 302 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 303 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 304 | KTA1267/YG/-T | TRANSISTOR | | |
| | R 200 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 201 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 208 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 209 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 210 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 211 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 212 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 213 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 214 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 215 | QRE141J-392Y | C RESISTOR | 3.9K 5% 1/4W | |
| | R 216 | QRE141J-182Y | C RESISTOR | 1.8K 5% 1/4W | |
| | R 217 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| ⚠ | R 218 | QRZ9015-221X | F RESISTOR | 220 1/4W | |
| ⚠ | R 219 | QRZ9015-221X | F RESISTOR | 220 1/4W | |
| | R 220 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 221 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 222 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 223 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 224 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 225 | QRE141J-153Y | C RESISTOR | 15K 5% 1/4W | |
| ⚠ | R 226 | QRK126J-4R7X | C RESISTOR | 4.7 5% 1/2W | |
| | R 227 | QRE141J-4R7Y | C RESISTOR | 4.7 5% 1/4W | |
| | R 230 | QRE141J-471Y | C RESISTOR | 470 5% 1/4W | |
| | R 231 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 235 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 236 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 237 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 238 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 239 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 240 | QRE141J-823Y | C RESISTOR | 82K 5% 1/4W | |
| | R 241 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 242 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 243 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 244 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 245 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 246 | QRE141J-823Y | C RESISTOR | 82K 5% 1/4W | |
| | R 247 | QRE141J-394Y | C RESISTOR | 390K 5% 1/4W | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R 248 | QRE141J-334Y | C RESISTOR | 330K 5% 1/4W | |
| | R 249 | QRE141J-475Y | C RESISTOR | 4.7M 5% 1/4W | |
| | R 250 | QRE141J-475Y | C RESISTOR | 4.7M 5% 1/4W | |
| | R 251 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 252 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 253 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 254 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 255 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 256 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 257 | QRE141J-332Y | C RESISTOR | 3.3K 5% 1/4W | |
| | R 258 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 259 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 260 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 261 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 262 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 263 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 264 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 265 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 266 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 267 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 268 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 269 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 270 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 271 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 272 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 273 | QRE141J-221Y | C RESISTOR | 220 5% 1/4W | |
| | R 274 | QRE141J-221Y | C RESISTOR | 220 5% 1/4W | |
| | R 275 | QRE141J-221Y | C RESISTOR | 220 5% 1/4W | |
| | R 276 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 277 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 300 | QRE141J-332Y | C RESISTOR | 3.3K 5% 1/4W | |
| | R 301 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 302 | QRE141J-182Y | C RESISTOR | 1.8K 5% 1/4W | |
| ⚠ | R 303 | QRZ9015-101X | F RESISTOR | 100 1/4W | |
| | R 304 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| ⚠ | R 305 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| ⚠ | R 306 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| | R 307 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 308 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 309 | QRE141J-153Y | C RESISTOR | 15K 5% 1/4W | |
| | R 310 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| ⚠ | R 311 | QRK126J-4R7X | C RESISTOR | 4.7 5% 1/2W | |
| | R 312 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| ⚠ | R 313 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| ⚠ | R 314 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| ⚠ | R 315 | QRZ9015-101X | F RESISTOR | 100 1/4W | |
| | R 316 | QRE141J-182Y | C RESISTOR | 1.8K 5% 1/4W | |
| | R 317 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 318 | QRE141J-332Y | C RESISTOR | 3.3K 5% 1/4W | |
| | R 319 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| ⚠ | R 320 | QRK126J-4R7X | C RESISTOR | 4.7 5% 1/2W | |
| | R 321 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| | R 322 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 323 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 324 | QRE141J-153Y | C RESISTOR | 15K 5% 1/4W | |
| | R 325 | QRE141J-332Y | C RESISTOR | 3.3K 5% 1/4W | |
| | R 326 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 327 | QRE141J-182Y | C RESISTOR | 1.8K 5% 1/4W | |
| ⚠ | R 328 | QRZ9015-101X | F RESISTOR | 100 1/4W | |
| | R 329 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| ⚠ | R 330 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| ⚠ | R 331 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| | R 332 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |

■ **Electrical parts list (SP-THV70 Main board)** **Block No. 06**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R 333 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 334 | QRE141J-153Y | C RESISTOR | 15K 5% 1/4W | |
| | R 335 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| ⚠ | R 336 | QRK126J-4R7X | C RESISTOR | 4.7 5% 1/2W | |
| | R 337 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| ⚠ | R 338 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| ⚠ | R 339 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| ⚠ | R 340 | QRZ9015-101X | F RESISTOR | 100 1/4W | |
| | R 341 | QRE141J-182Y | C RESISTOR | 1.8K 5% 1/4W | |
| | R 342 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 343 | QRE141J-332Y | C RESISTOR | 3.3K 5% 1/4W | |
| | R 344 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| ⚠ | R 345 | QRK126J-4R7X | C RESISTOR | 4.7 5% 1/2W | |
| | R 346 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| | R 347 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 348 | QRE141J-153Y | C RESISTOR | 15K 5% 1/4W | |
| | R 349 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 350 | QRE141J-332Y | C RESISTOR | 3.3K 5% 1/4W | |
| | R 351 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 352 | QRE141J-182Y | C RESISTOR | 1.8K 5% 1/4W | |
| ⚠ | R 353 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| ⚠ | R 354 | QRT012J-R22 | UNF.MF.RES. | 5% 1/1W | |
| | R 355 | QRE141J-563Y | C RESISTOR | 56K 5% 1/4W | |
| | R 356 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 357 | QRE141J-153Y | C RESISTOR | 15K 5% 1/4W | |
| | R 358 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| ⚠ | R 359 | QRK126J-4R7X | C RESISTOR | 4.7 5% 1/2W | |
| | R 360 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| | R 370 | QRE141J-152Y | C RESISTOR | 1.5K 5% 1/4W | |
| | R 371 | QRE141J-152Y | C RESISTOR | 1.5K 5% 1/4W | |
| | R 372 | QRE141J-202Y | C RESISTOR | 2.0K 5% 1/4W | |
| | R 373 | QRE141J-152Y | C RESISTOR | 1.5K 5% 1/4W | |
| | R 374 | QRE141J-202Y | C RESISTOR | 2.0K 5% 1/4W | |
| | R 375 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 376 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 377 | QRE141J-562Y | C RESISTOR | 5.6K 5% 1/4W | |
| | R 378 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 379 | QRE141J-562Y | C RESISTOR | 5.6K 5% 1/4W | |
| | R 380 | QRE141J-681Y | C RESISTOR | FOR B3106 | |
| | R 381 | QRE141J-681Y | C RESISTOR | FOR B3107 | |
| | R 400 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| | R 401 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| | R 402 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| | R 403 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| | R 404 | QRE141J-8R2Y | C RESISTOR | 8.2 5% 1/4W | |
| ⚠ | RY400 | QSK0055-001 | RELAY | | |
| | RY401 | QSK0109-001 | RELAY | | |
| | RY402 | QSK0109-001 | RELAY | | |
| | RY403 | QSK0109-001 | RELAY | | |
| ⚠ | Z 400 | QNG0020-001Z | FUSE CLIP | | |
| ⚠ | Z 401 | QNG0020-001Z | FUSE CLIP | | |

■ **Electrical parts list (SP-THV70 Sub board)** **Block No. 07**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 100 | QTE1H06-475Z | E CAPACITOR | | |
| | C 101 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C 102 | QTE1H06-475Z | E CAPACITOR | | |
| | C 103 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C 104 | QETN1HM-105Z | E CAPACITOR | 1.0MF 20% 50V | |
| | C 105 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C 106 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 107 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 108 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 109 | QTE1H06-475Z | E CAPACITOR | | |
| | C 110 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 111 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 112 | QTE1H06-475Z | E CAPACITOR | | |
| | C 113 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 114 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | C 115 | QETN1HM-105Z | E CAPACITOR | 1.0MF 20% 50V | |
| | C 116 | QETN1HM-106Z | E CAPACITOR | 10MF 20% 50V | |
| | C 118 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 119 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 120 | QCBB1HK-101Y | C CAPACITOR | 100PF 10% 50V | |
| | C 121 | QCBB1HK-101Y | C CAPACITOR | 100PF 10% 50V | |
| | C 122 | QCBB1HK-101Y | C CAPACITOR | 100PF 10% 50V | |
| | C 123 | QCBB1HK-101Y | C CAPACITOR | 100PF 10% 50V | |
| | C 124 | QCBB1HK-101Y | C CAPACITOR | 100PF 10% 50V | |
| | C 125 | QCBB1HK-101Y | C CAPACITOR | 100PF 10% 50V | |
| | C 126 | QCSB1HJ-100Y | C CAPACITOR | 10PF 5% 50V | |
| | C 128 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 129 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 500 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 501 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 502 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 503 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 504 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 505 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 506 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 507 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 508 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 509 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 510 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 511 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 512 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 513 | QFVF1HJ-104Z | MF CAPACITOR | .10MF 5% 50V | |
| | C 514 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 515 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 516 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 517 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C 518 | QETN1EM-107Z | E CAPACITOR | 100MF 20% 25V | |
| | C 519 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C 520 | QEZ0223-478 | E CAPACITOR | 4700MF | |
| | C 521 | QEZ0223-478 | E CAPACITOR | 4700MF | |
| | C 522 | QETM1EM-688 | E CAPACITOR | 6800MF 20% 25V | |
| | C 523 | QETM1EM-688 | E CAPACITOR | 6800MF 20% 25V | |
| | C 524 | QFLC2AJ-104Z | M CAPACITOR | .10MF 5% 100V | |
| | C 525 | QFLC2AJ-104Z | M CAPACITOR | .10MF 5% 100V | |
| | C 526 | QFLC2AJ-104Z | M CAPACITOR | .10MF 5% 100V | |
| | C 527 | QFLC2AJ-104Z | M CAPACITOR | .10MF 5% 100V | |
| | C 528 | QFLC2AJ-104Z | M CAPACITOR | .10MF 5% 100V | |
| | C 529 | QFLC2AJ-104Z | M CAPACITOR | .10MF 5% 100V | |
| | C 530 | QETN1CM-227Z | E CAPACITOR | 220MF 20% 16V | |
| | C 531 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 532 | QETN1HM-106Z | E CAPACITOR | 10MF 20% 50V | |
| | C 533 | QETN1EM-476Z | E CAPACITOR | 47MF 20% 25V | |
| | C 550 | QETN1HM-335Z | E CAPACITOR | 3.3MF 20% 50V | |

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | C 551 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 552 | QETN1HM-475Z | E CAPACITOR | 4.7MF 20% 50V | |
| | C 553 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 554 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 555 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 556 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 557 | QFN31HJ-103Z | M CAPACITOR | .010MF 5% 50V | |
| | C 558 | QETN1HM-226Z | E CAPACITOR | 22MF 20% 50V | |
| | CN101 | QGB2510K2-12 | CONNECTOR | | |
| | CN104 | QGA3901C1-05 | CONNECTOR | | |
| | CN201 | QGB2510J1-12 | CONNECTOR | | |
| | CN202 | QGB2510J1-06 | CONNECTOR | | |
| | CN203 | QGB2510J1-14 | CONNECTOR | | |
| | CN205 | QGB2510J1-20 | CONNECTOR | | |
| | CN206 | QGB2510J1-14 | CONNECTOR | | |
| | CN210 | QGB2510J1-10 | CONNECTOR | | |
| | CN211 | QGB2510J1-12 | CONNECTOR | | |
| | D 500 | 1SS133-T2 | SI DIODE IM | | |
| | D 501 | 1SS133-T2 | SI DIODE IM | | |
| | D 502 | MTZJ5.1C-T2 | ZENER DIODE | | |
| | D 503 | 1SS133-T2 | SI DIODE IM | | |
| | D 504 | 1SS133-T2 | SI DIODE IM | | |
| | D 505 | 1SS133-T2 | SI DIODE IM | | |
| | D 506 | MTZJ30C-T2 | ZENER DIODE | | |
| | D 508 | MTZJ5.1B-T2 | ZENER DIODE | | |
| | D 509 | MTZJ12C-T2 | ZENER DIODE | | |
| | D 510 | MTZJ12C-T2 | ZENER DIODE | | |
| ⚠ | D 511 | 1N5402M-20 | DIODE | | |
| ⚠ | D 512 | 1N5402M-20 | DIODE | | |
| ⚠ | D 513 | 1N5402M-20 | DIODE | | |
| ⚠ | D 514 | 1N5402M-20 | DIODE | | |
| ⚠ | D 515 | 6A20G-E4 | DIODE | | |
| ⚠ | D 516 | 6A20G-E4 | DIODE | | |
| ⚠ | D 517 | 6A20G-E4 | DIODE | | |
| ⚠ | D 518 | 6A20G-E4 | DIODE | | |
| | D 519 | 1SS133-T2 | SI DIODE IM | | |
| | D 520 | 1SS133-T2 | SI DIODE IM | | |
| | D 521 | 1SS133-T2 | SI DIODE IM | | |
| | D 522 | 1SS133-T2 | SI DIODE IM | | |
| | D 523 | MTZJ15C-T2 | Z DIODE | | |
| | D 524 | MTZJ6.2B-T2 | ZENER DIODE | | |
| | D 525 | MTZJ6.2B-T2 | ZENER DIODE | | |
| | D 526 | MTZJ15C-T2 | Z DIODE | | |
| | D 527 | 1SS133-T2 | SI DIODE IM | | |
| | D 528 | 1SS133-T2 | SI DIODE IM | | |
| | D 530 | 1SS133-T2 | SI DIODE IM | | |
| | D 531 | 1SS133-T2 | SI DIODE IM | | |
| | D 532 | MTZJ30C-T2 | ZENER DIODE | | |
| | D 533 | MTZJ6.2B-T2 | ZENER DIODE | | |
| | D 534 | 1SS133-T2 | SI DIODE IM | | |
| | D 535 | MTZJ15C-T2 | Z DIODE | | |
| | D 536 | 1SS133-T2 | SI DIODE IM | | |
| | IC100 | BA3121 | IC | | |
| | IC101 | BA3121 | IC | | |
| | IC102 | BA3121 | IC | | |
| | IC103 | BA15218N | IC | | |
| | IC108 | BA15218N | IC | | |
| | IC109 | BA15218N | IC | | |
| | IC110 | BA15218N | IC | | |
| | J 100 | QND0079-001 | DIN CONNECTOR | | |
| | K 100 | QQR0621-001Z | FERRITE BEADS | | |
| | K 101 | QQR0621-001Z | FERRITE BEADS | | |
| | Q 500 | KRA104M-T | D.TR.I.M | | |

■ **Electrical parts list (SP-THV70 Sub board)** **Block No. 07**

| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | Q 501 | KRC102M-T | D.TRANSISTOR | | |
| | Q 502 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 503 | KRC102M-T | D.TRANSISTOR | | |
| | Q 504 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 505 | KRC102M-T | D.TRANSISTOR | | |
| ⚠ | Q 506 | 2SD2037/EF/-T | TRANSISTOR | | |
| ⚠ | Q 507 | 2SA1359/OY/ | TRANSISTOR | | |
| | Q 508 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 509 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 510 | KRA102M-T | D.TRANSISTOR | | |
| | Q 511 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 512 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 513 | KRC104M-T | D.TR.I.M | | |
| | Q 514 | DTC115ESA-T | D.TR.I.M | | |
| | Q 515 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 516 | KTA1267/YG/-T | TRANSISTOR | | |
| | Q 517 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 518 | KRA111M-T | D.TR.I.M | | |
| | Q 519 | KRA111M-T | D.TR.I.M | | |
| | Q 520 | 2SK373/OY/-T | FET I/M | | |
| | Q 521 | 2SK373/OY/-T | FET I/M | | |
| | Q 522 | KTC3199/GL/-T | TRANSISTOR | | |
| | Q 523 | KRA104M-T | D.TR.I.M | | |
| | R 100 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 102 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 104 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 106 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 108 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 110 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 112 | QRE141J-101Y | C RESISTOR | 100 5% 1/4W | |
| | R 113 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 114 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 115 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 116 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 118 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 119 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 121 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 122 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 123 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 124 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 130 | QRE141J-473Y | C RESISTOR | 47K 5% 1/4W | |
| | R 132 | QRE141J-123Y | C RESISTOR | 12K 5% 1/4W | |
| | R 133 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 134 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 135 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 136 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 137 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 138 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 139 | QRE141J-471Y | C RESISTOR | 470 5% 1/4W | |
| | R 500 | QRE141J-392Y | C RESISTOR | 3.9K 5% 1/4W | |
| | R 501 | QRE141J-183Y | C RESISTOR | 18K 5% 1/4W | |
| | R 502 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 504 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 505 | QRE141J-392Y | C RESISTOR | 3.9K 5% 1/4W | |
| | R 506 | QRE141J-183Y | C RESISTOR | 18K 5% 1/4W | |
| | R 507 | QRE141J-392Y | C RESISTOR | 3.9K 5% 1/4W | |
| | R 508 | QRE141J-183Y | C RESISTOR | 18K 5% 1/4W | |
| | R 509 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 510 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 511 | QRE141J-392Y | C RESISTOR | 3.9K 5% 1/4W | |
| | R 512 | QRE141J-183Y | C RESISTOR | 18K 5% 1/4W | |
| | R 513 | QRE141J-392Y | C RESISTOR | 3.9K 5% 1/4W | |
| | R 514 | QRE141J-183Y | C RESISTOR | 18K 5% 1/4W | |

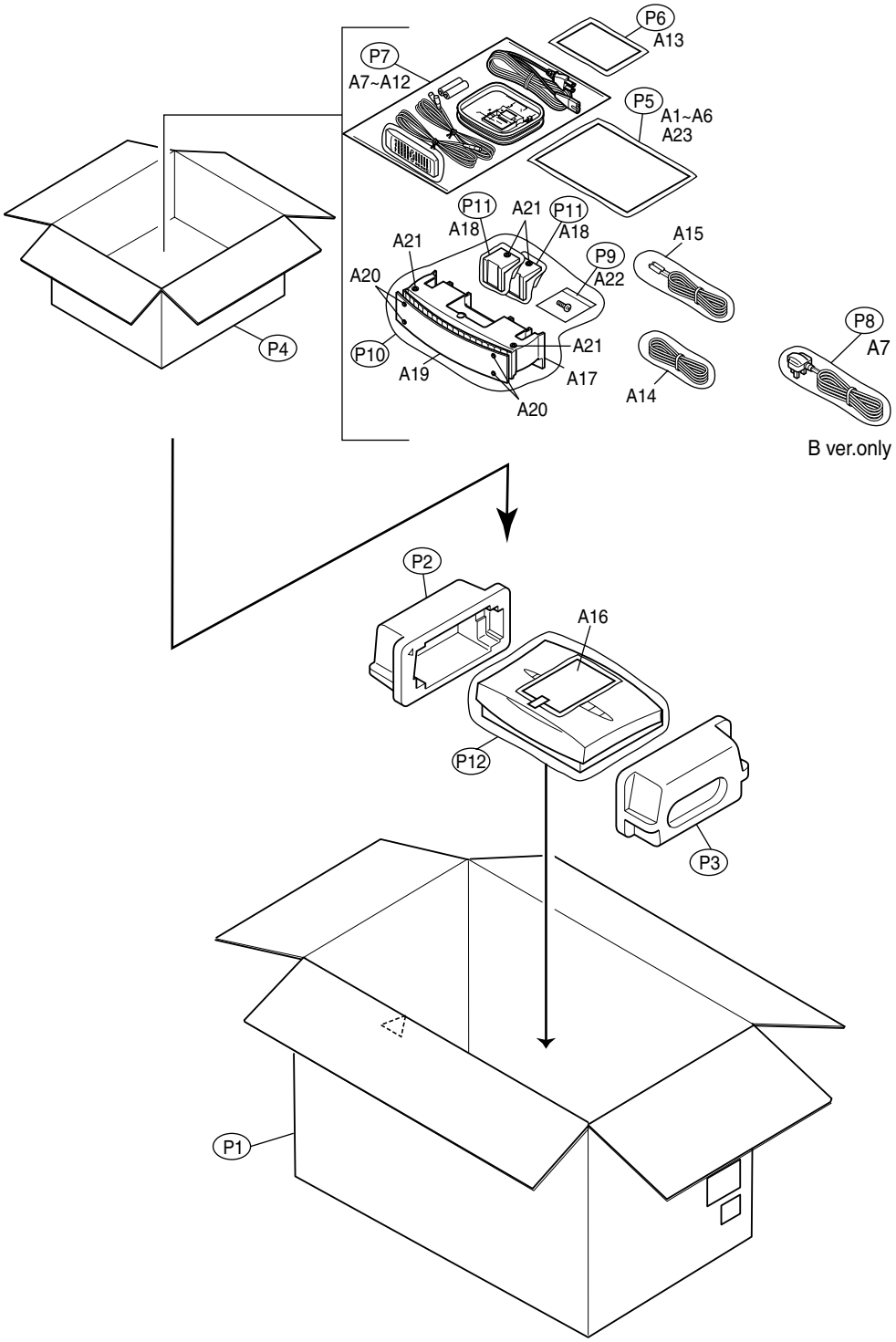
| ⚠ | Item | Parts number | Parts name | Remarks | Area |
|---|---|---|---|---|---|
| | R 515 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| | R 516 | QRE141J-100Y | C RESISTOR | 10 5% 1/4W | |
| ⚠ | R 517 | QRZ9005-100X | F RESISTOR | 10 1/4W | |
| | R 518 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 519 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| ⚠ | R 520 | QRZ9005-100X | F RESISTOR | 10 1/4W | |
| | R 521 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 522 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 523 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 524 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| ⚠ | R 525 | QRL012J-271 | UNF OMF.RES | 270 5% 1/1W | |
| | R 526 | QRE141J-122Y | C RESISTOR | 1.2K 5% 1/4W | |
| | R 527 | QRE141J-331Y | C RESISTOR | 330 5% 1/4W | |
| | R 528 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 529 | QRE141J-753Y | C RESISTOR | 75K 5% 1/4W | |
| | R 530 | QRE141J-101Y | C RESISTOR | 100 5% 1/4W | |
| | R 531 | QRE141J-753Y | C RESISTOR | 75K 5% 1/4W | |
| | R 532 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 533 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 534 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 535 | QRE141J-224Y | C RESISTOR | 220K 5% 1/4W | |
| ⚠ | R 536 | QRZ9006-4R7X | F RESISTOR | 4.7 1/4W | |
| | R 537 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 538 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 539 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 540 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 541 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 542 | QRE141J-222Y | C RESISTOR | 2.2K 5% 1/4W | |
| | R 543 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 544 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 545 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 546 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 547 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 548 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 549 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 550 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 551 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 552 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 553 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 554 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 555 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 556 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 557 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 558 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 559 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 560 | QRE141J-223Y | C RESISTOR | 22K 5% 1/4W | |
| | R 561 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 562 | QRE141J-101Y | C RESISTOR | 100 5% 1/4W | |
| | R 563 | QRE141J-102Y | C RESISTOR | 1.0K 5% 1/4W | |
| | R 564 | QRE141J-104Y | C RESISTOR | 100K 5% 1/4W | |
| | R 565 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 566 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | R 567 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 568 | QRE141J-103Y | C RESISTOR | 10K 5% 1/4W | |
| | R 570 | QRE141J-472Y | C RESISTOR | 4.7K 5% 1/4W | |
| | S 100 | QSW0834-001 | PUSH SWITCH | | |
| | VR100 | QVQ0021-B14 | V RESISTOR | | |
| | Z 500 | QNG0020-001Z | FUSE CLIP | | |
| | Z 501 | QNG0020-001Z | FUSE CLIP | | |
| | Z 502 | QNG0020-001Z | FUSE CLIP | | |
| | Z 503 | QNG0020-001Z | FUSE CLIP | | |

< MEMO >

# Packing materials and accessories parts list

## (XV-THV70R)

Block No. M 3 M M
Block No. M 5 M M



## ■ Parts list (Packing)

**Block No. M3MM**

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | P 1 | LV33671-001A | CARTON BOX | 1 | | |
| | P 2 | GV10099-001A | CUSHION(L) | 1 | | |
| | P 3 | GV10099-002A | CUSHION(R) | 1 | | |
| | P 4 | LV33687-001A | ACCESSORY BOX | 1 | STAND & ACCESSORY | |
| | P 5 | QPA03004503P | POLY BAG | 1 | FOR INST | EN |
| | | QPA02503503P | POLY BAG | 1 | FOR INST | B,E |
| | P 6 | QPA01702503P | POLY BAG | 1 | FOR WARRANTY CARD | |
| | P 7 | QPA01703503P | POLY BAG | 1 | FOR ACC | |
| | P 8 | QPA01503503 | POLY BAG | 1 | FOR P.CORD | B |
| | P 9 | QPA00801505 | POLY BAG | 1 | FOR QYSPSP3010Z | |
| | P 10 | GV30364-001A | POLY BAG | 1 | AIR CAP POLY BAG | |
| | P 11 | QPA01001505 | ENVELOPE | 2 | | |
| | P 12 | QPC04504515P | POLY BAG | 1 | FOR SET | |

## ■ Parts list (Accessories)

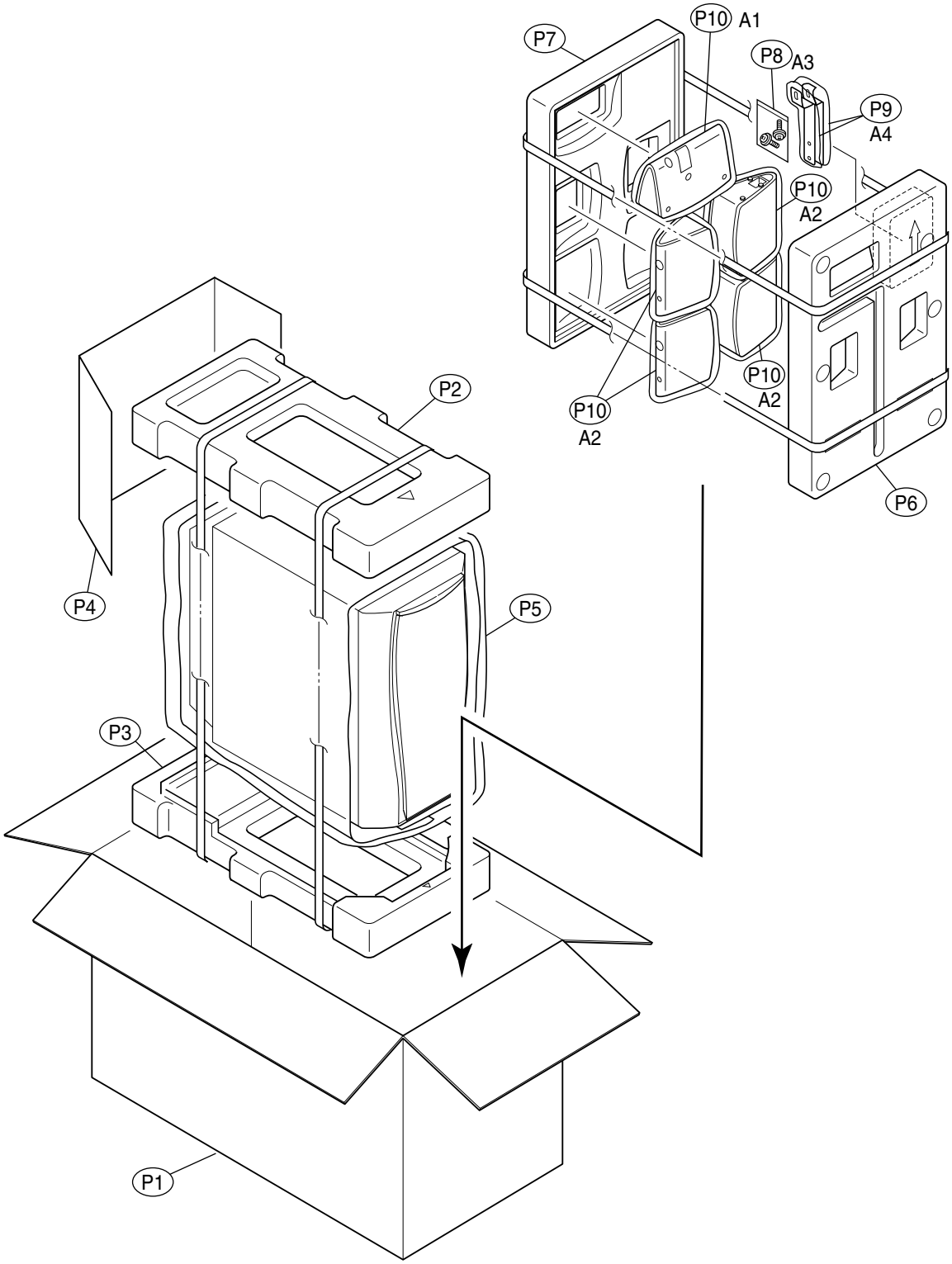
**Block No. M5MM**

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | A 1 | LVT0865-004B | INST.BOOK | 1 | ENG | B |
| | | LVT0865-005B | INST.BOOK | 1 | GER,FRE,DUT | E |
| | | LVT0865-006B | INST.BOOK | 1 | SWE,FIN,DAN | EN |
| | | LVT0865-007B | INST.BOOK | 1 | GER,FRE,SPA,ITA | EN |
| | A 2 | GV40352-001A | PAPER PATTERN | 1 | FOLD HALF INTO | |
| | A 3 | VNA3000-204 | REGIST.CARD | 1 | | B |
| | A 4 | E43486-340B | SAFETY INST | 1 | | B |
| | A 5 | LV43129-002A | SUPPLE SHEET | 1 | | |
| | A 6 | LV43147-002A | CAUTION SHEET | 1 | | |
| ⚠ | A 7 | QMPP060-183-JD | POWER CORD | 1 | | B |
| ⚠ | | QMPL150-183-JC | POWER CORD | 1 | | E,EN |
| | A 8 | ---------- | BATTERY | 2 | FOR REMOCON | |
| | A 9 | QAM0423-002 | VIDEO CABLE | 1 | | |
| | A 10 | QAL0014-001 | AM LOOP ANT | 1 | AM ANT | |
| | A 11 | QAL0432-001 | ANT.WIRE | 1 | FM ANT | |
| | A 12 | RM-STHV70R | REMOCON UNIT | 1 | | |
| | A 13 | BT-54013-3 | W.CARD | 1 | | |
| | A 14 | LV42980-001A | SPK CORD ASSY | 1 | | |
| | A 15 | QAM0381-001 | SYSTEM CABLE | 1 | | |
| | A 16 | GV40351-001A | CAUTION SHEET | 1 | (9 LANGUAGE) | |
| | A 17 | LV10645-001A | STAND BASE | 1 | | |
| | A 18 | GV30248-002A | STAND LEG | 2 | | |
| | A 19 | LV21197-001A | STAND LENS | 1 | | |
| | A 20 | LV41587-001A | SPECIAL SCREW | 4 | S.LENS+S.BASE | |
| | A 21 | GV40270-001A | FOOT | 4 | STAND BASE&LEG | |
| | A 22 | QYSBST3010Z | T.SCREW | 1 | BRAZIER HEAD S-TITE | |

# Packing materials and accessories parts list

## (SP-THV70)

Block No. M 4 M M
Block No. M 6 M M



## ■ Parts list (SP-THV70 Packing)

**Block No. M4MM**

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | P 1 | LV31492-017A | CARTON | 1 | | |
| | P 2 | LV21230-001A | PACKING PAD | 1 | | |
| | P 3 | LV21230-002A | PACKING PAD | 1 | | |
| | P 4 | LV42058-001A | CARTON SHEET | 1 | | |
| | P 5 | QPA08009005P | POLY BAG | 1 | | |
| | P 6 | 8000048101 | TOP CUSHION | 1 | | |
| | P 7 | 8000048111 | BOTTOM CUSHION | 1 | | |
| | P 8 | 85-000-357-21 | POLY BAG | 1 | | |
| | P 9 | 8500035701 | POLY BAG | 2 | | |
| | P 10 | 85-000-327-71 | POLY BAG | 5 | | |

## ■ Parts list (SP-THV70 Accessories)

**Block No. M6MM**

| ⚠ | Item | Parts number | Parts name | Q'ty | Description | Area |
|---|---|---|---|---|---|---|
| | A 1 | SP-XCV70K | SPEAKER BOX | 1 | SP-THV70 | |
| | A 2 | SP-XSV70K | SPEAKER BOX | 4 | SP-THV70 | |
| | A 3 | 7200036311 | BOLT | 2 | | |
| | A 4 | 8400020001 | BRACKET | 2 | | |

JVC

# SCHEMATIC DIAGRAMS

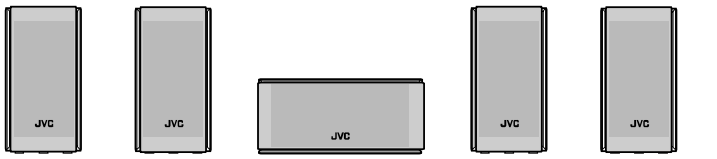
## DVD DIGITAL CINEMA SYSTEM

# TH-V70R

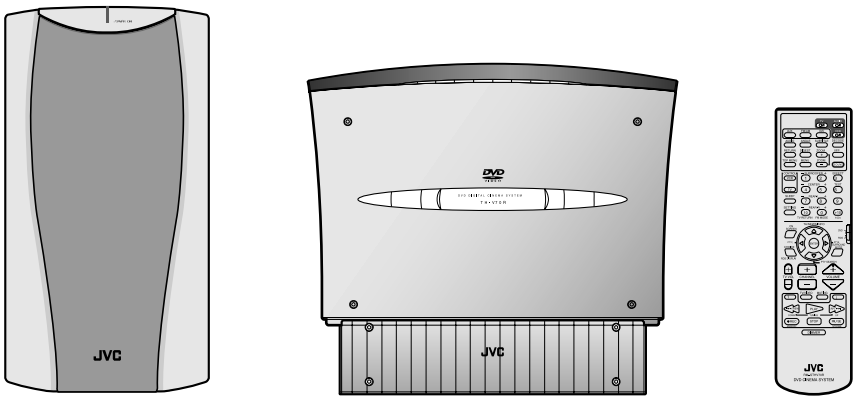
**CD-ROM No.SML200207**

Area suffix

B ---------- U.K.
E ---------- Continental Europe
EN ---------- Northern Europe



**SP-XSV70 SP-XSV70 SP-XCV70 SP-XSV70 SP-XSV70**



**SP-PWV70** **XV-THV70R**

## Contents


Block diagrams ---------- 2-1
Standard schematic diagrams ---------- 2-9
Printed circuit boards ---------- 2-20～24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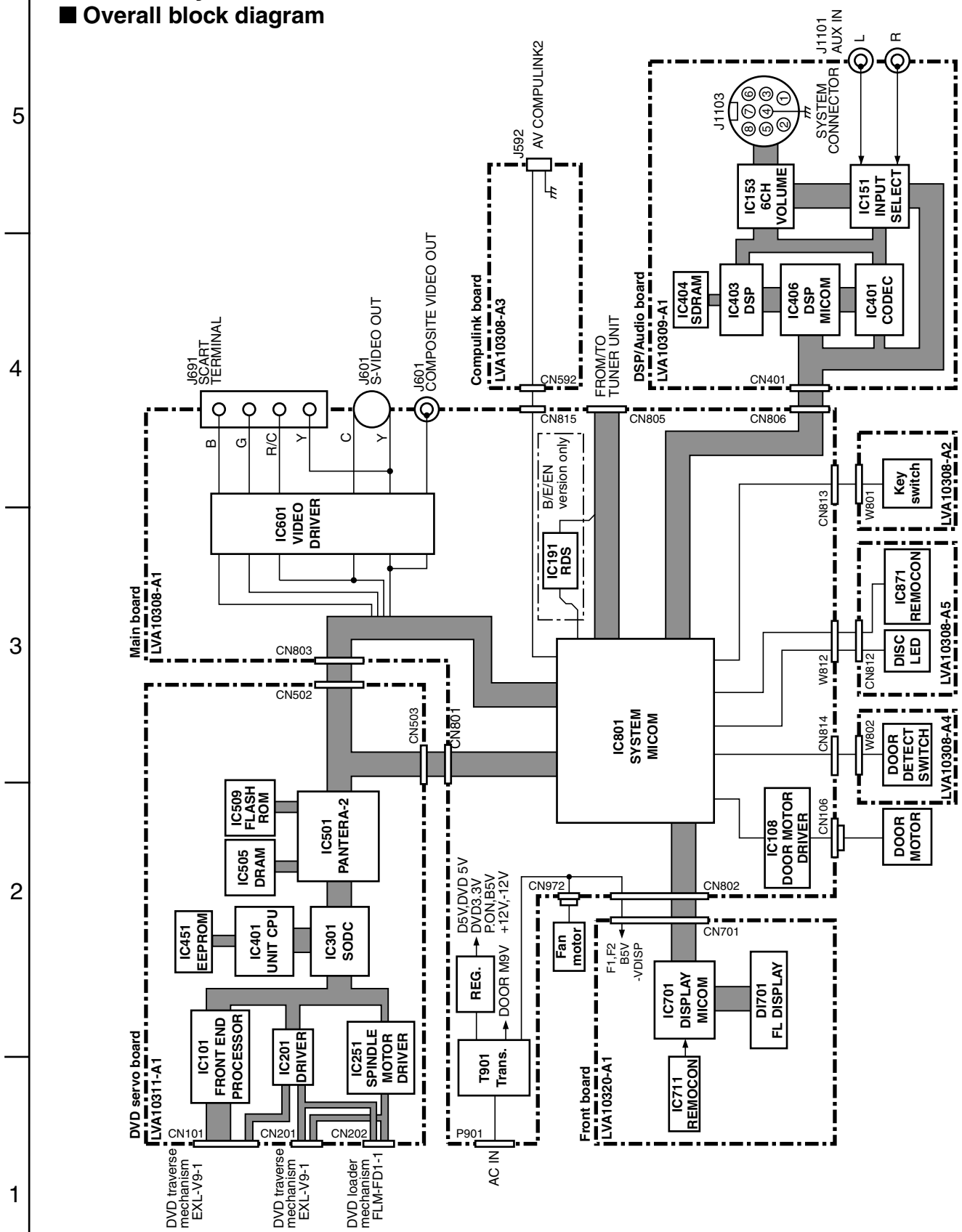
No.21108SCH
Jul. 2002

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
(This regulation does not correspond to J and C version.)

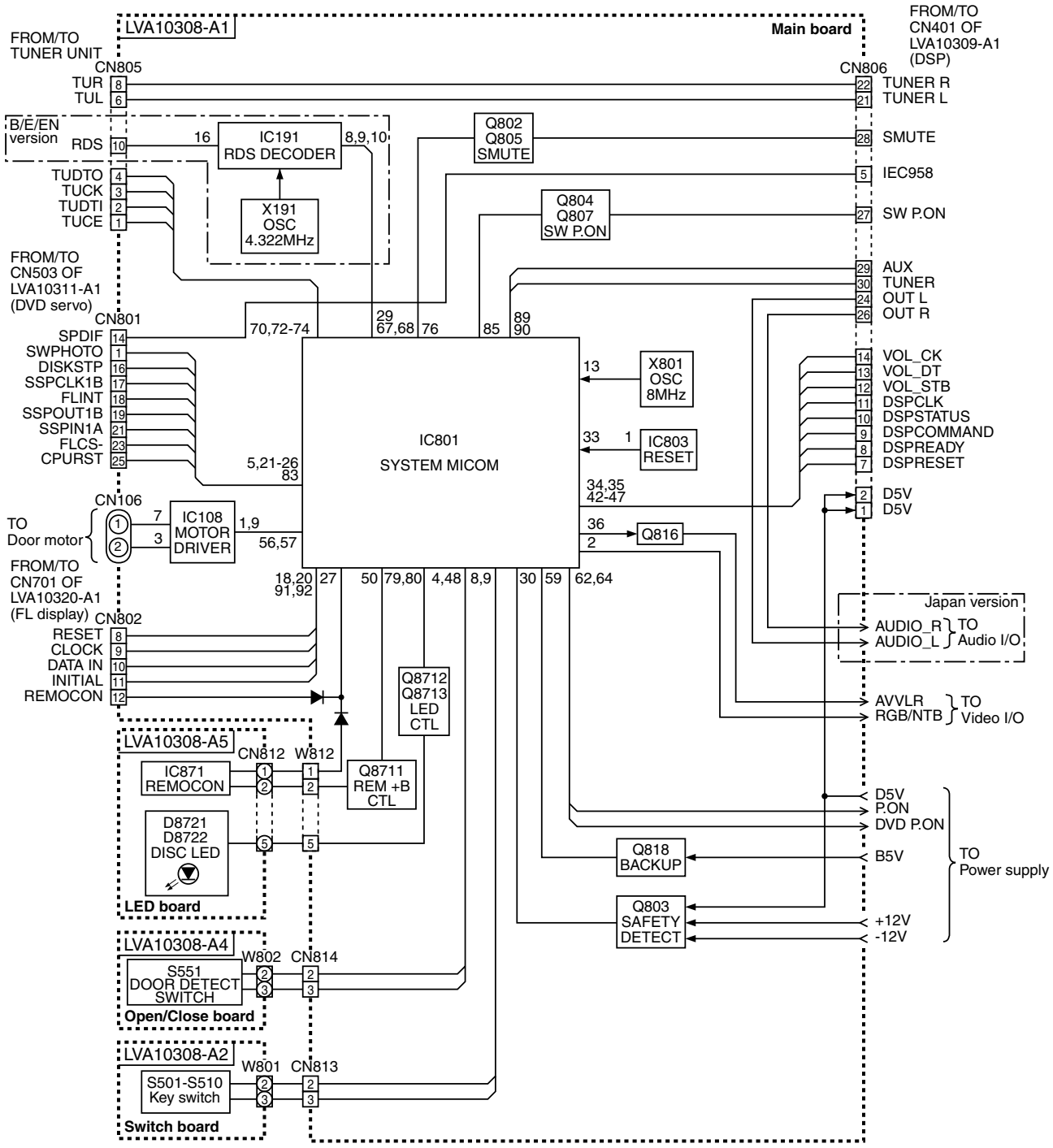
# Block diagrams

## <Main body section>

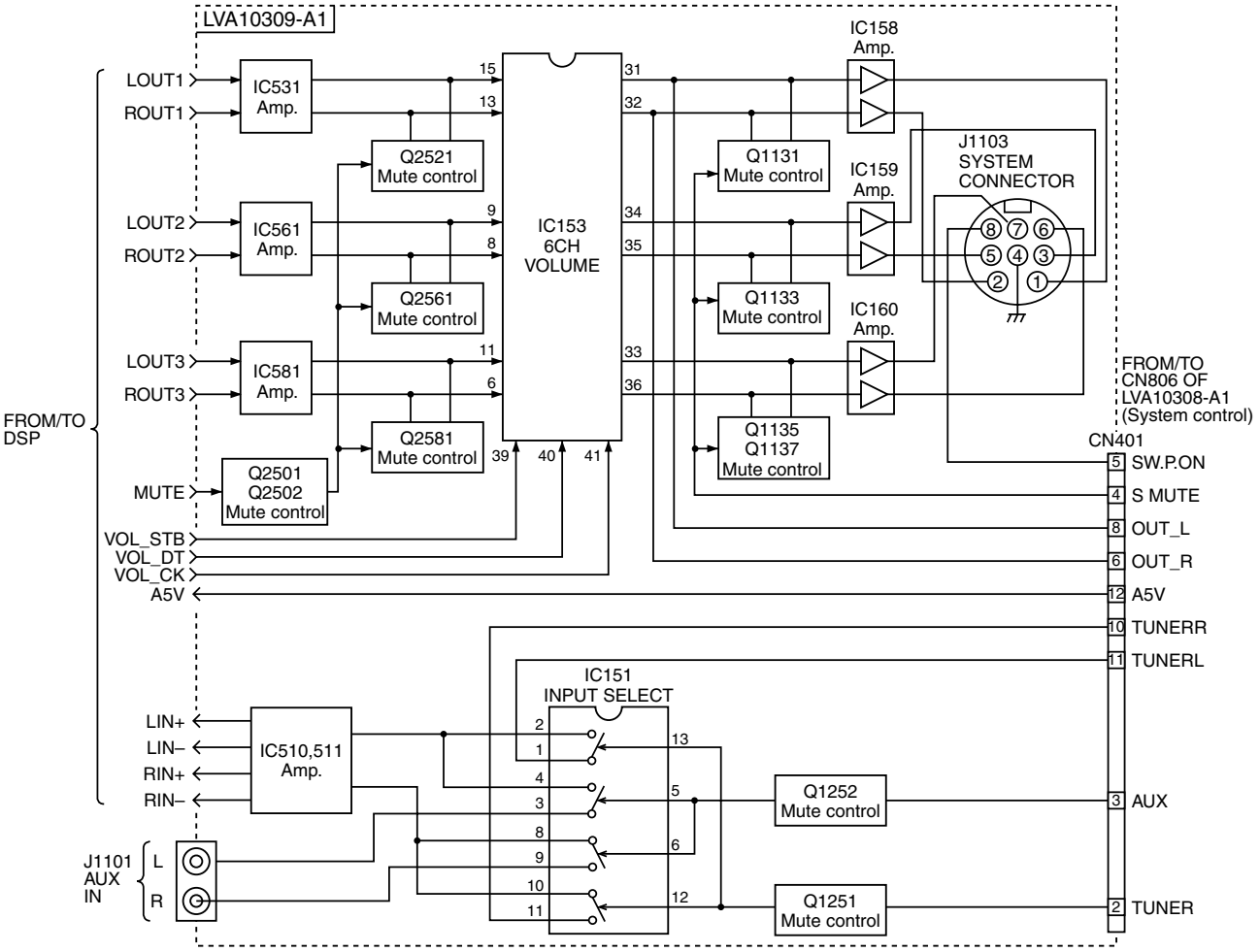
### ■ Overall block diagram



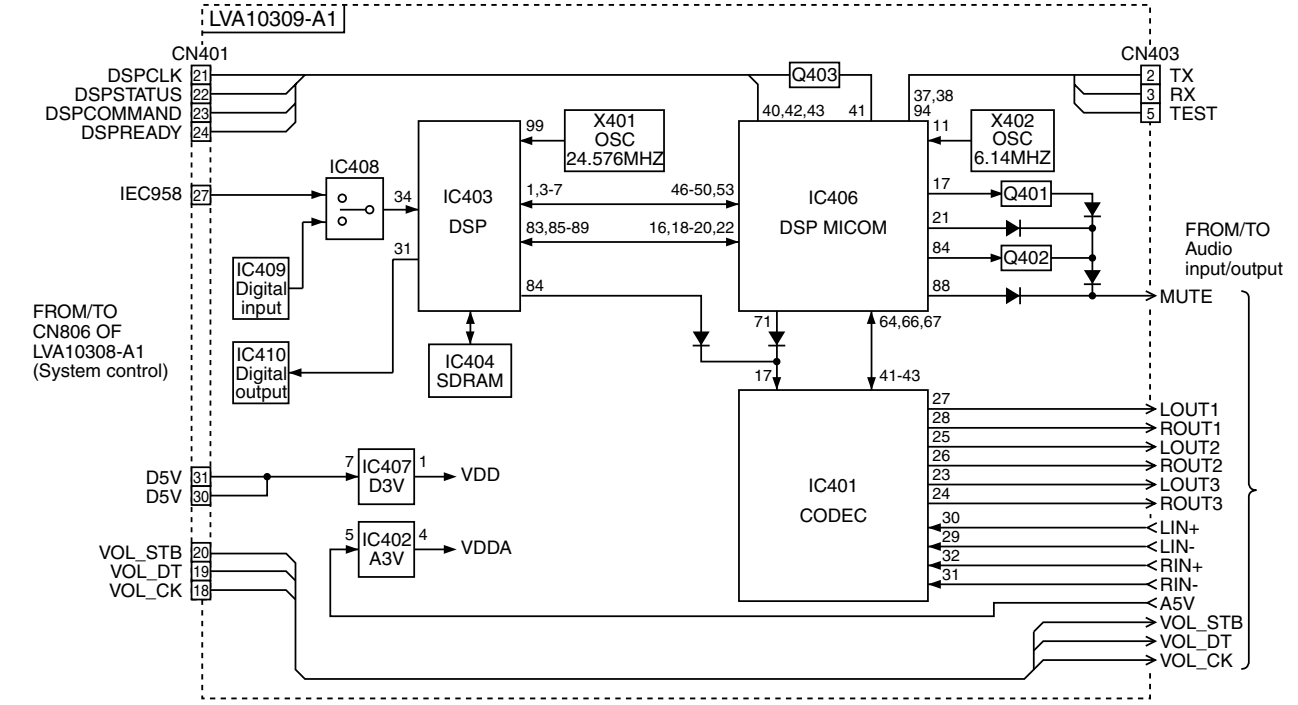
## ■ System control section



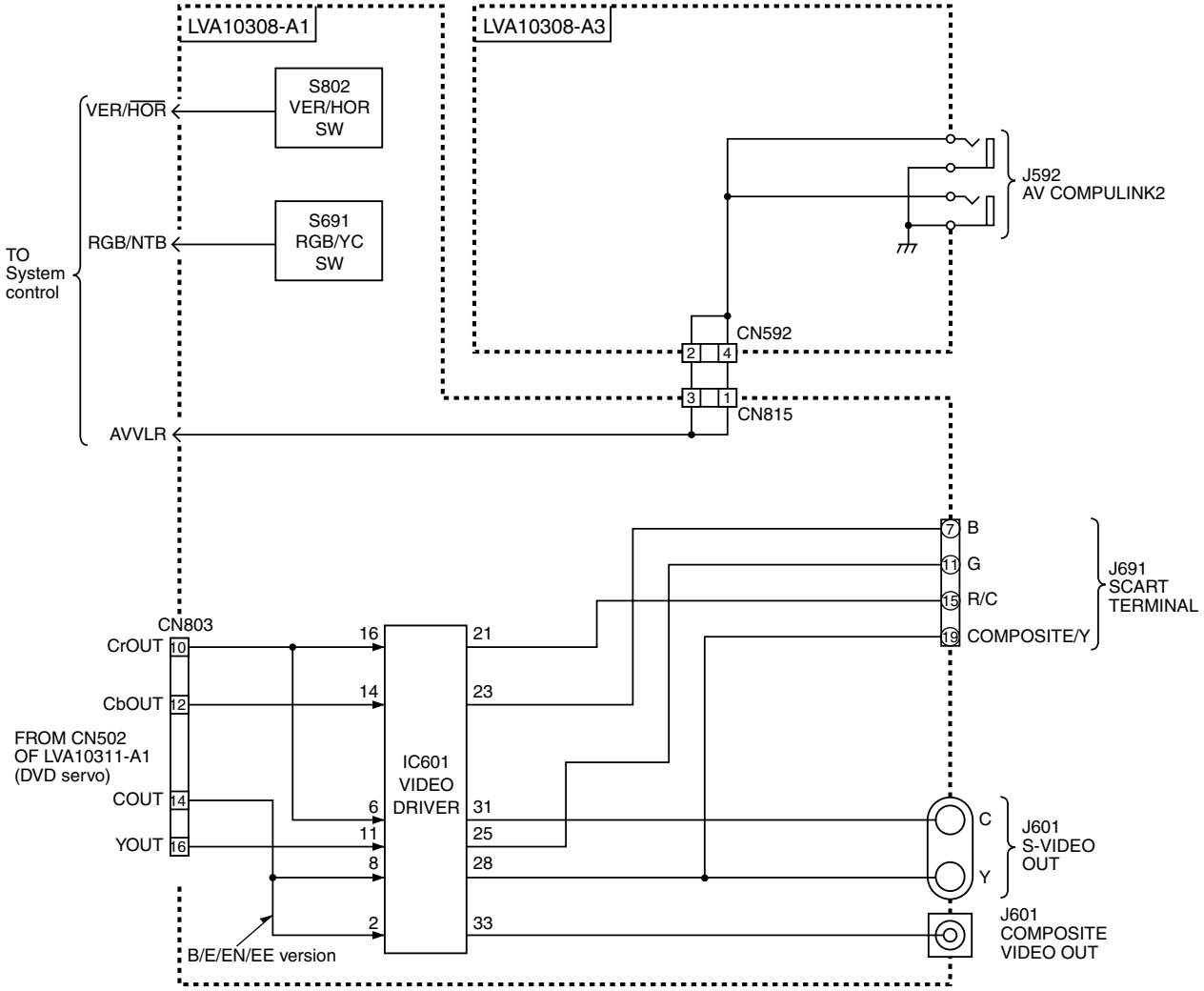
## ■ Audio input/output section



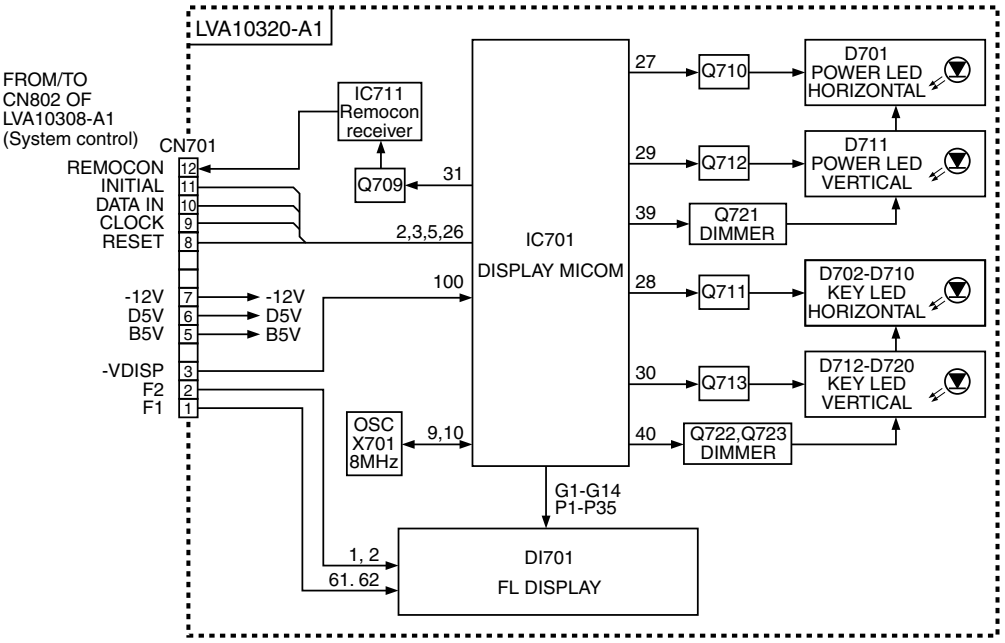

## ■ DSP section



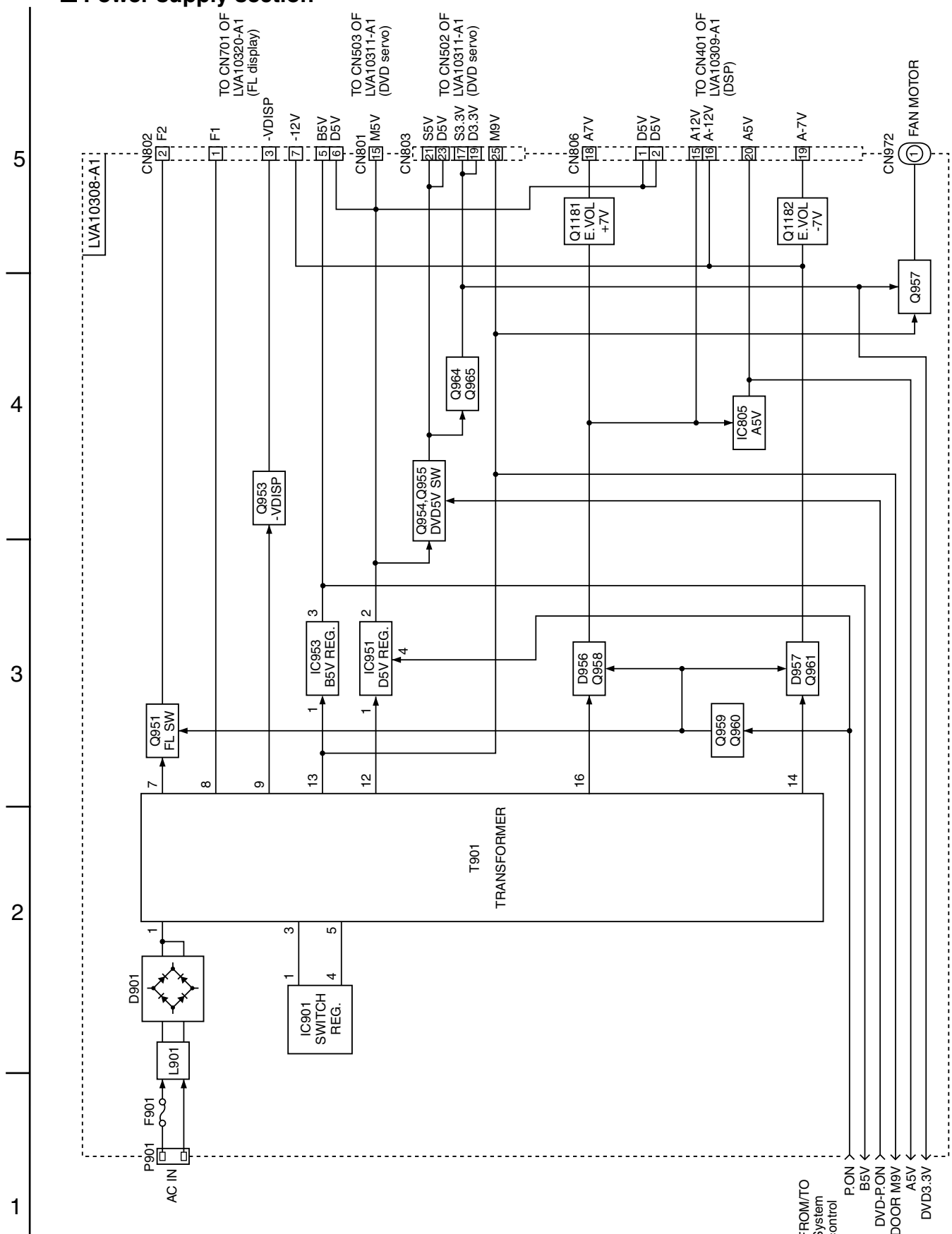
## ■ Video output section



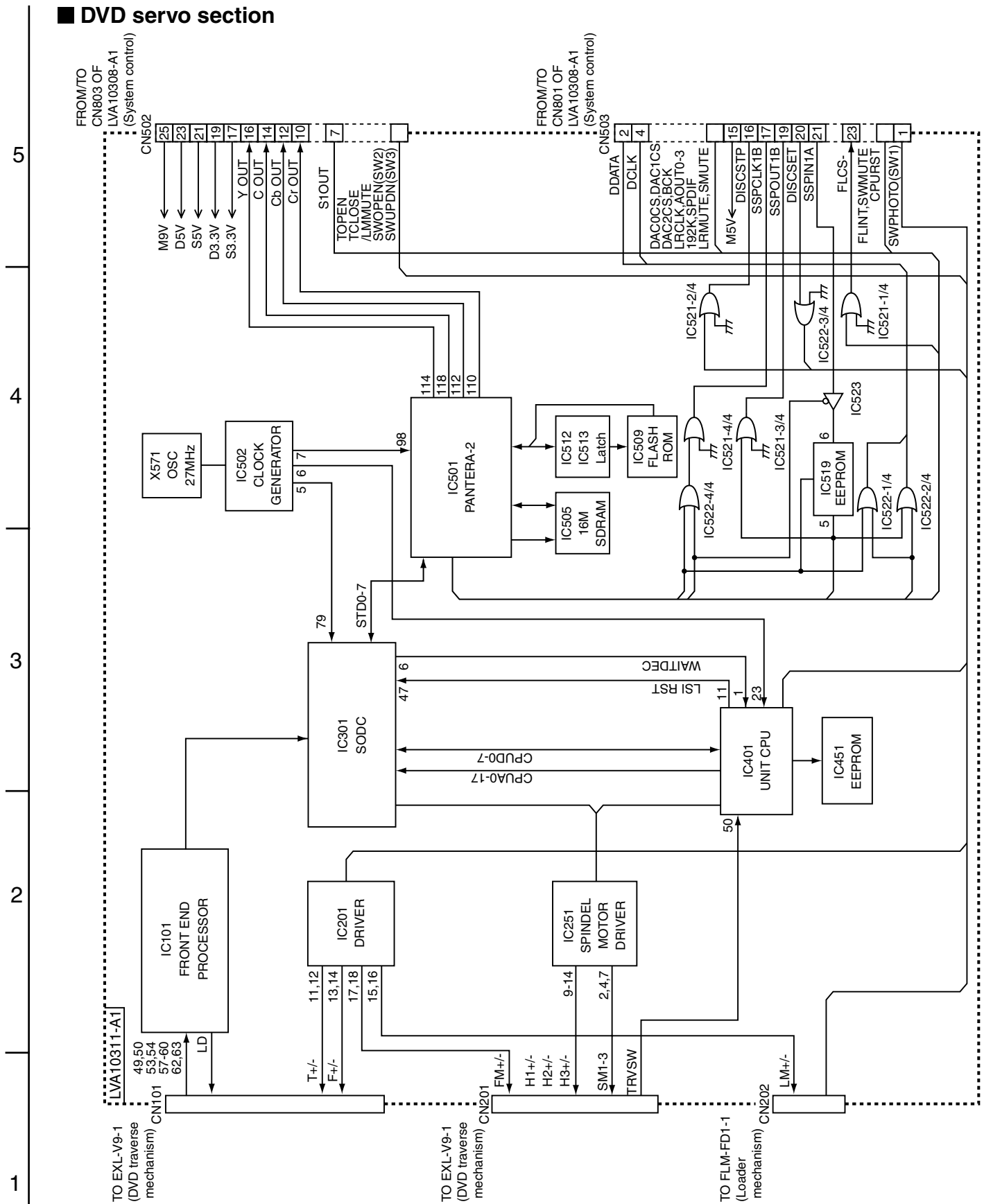

## ■ FL display section



## ■ Power supply section

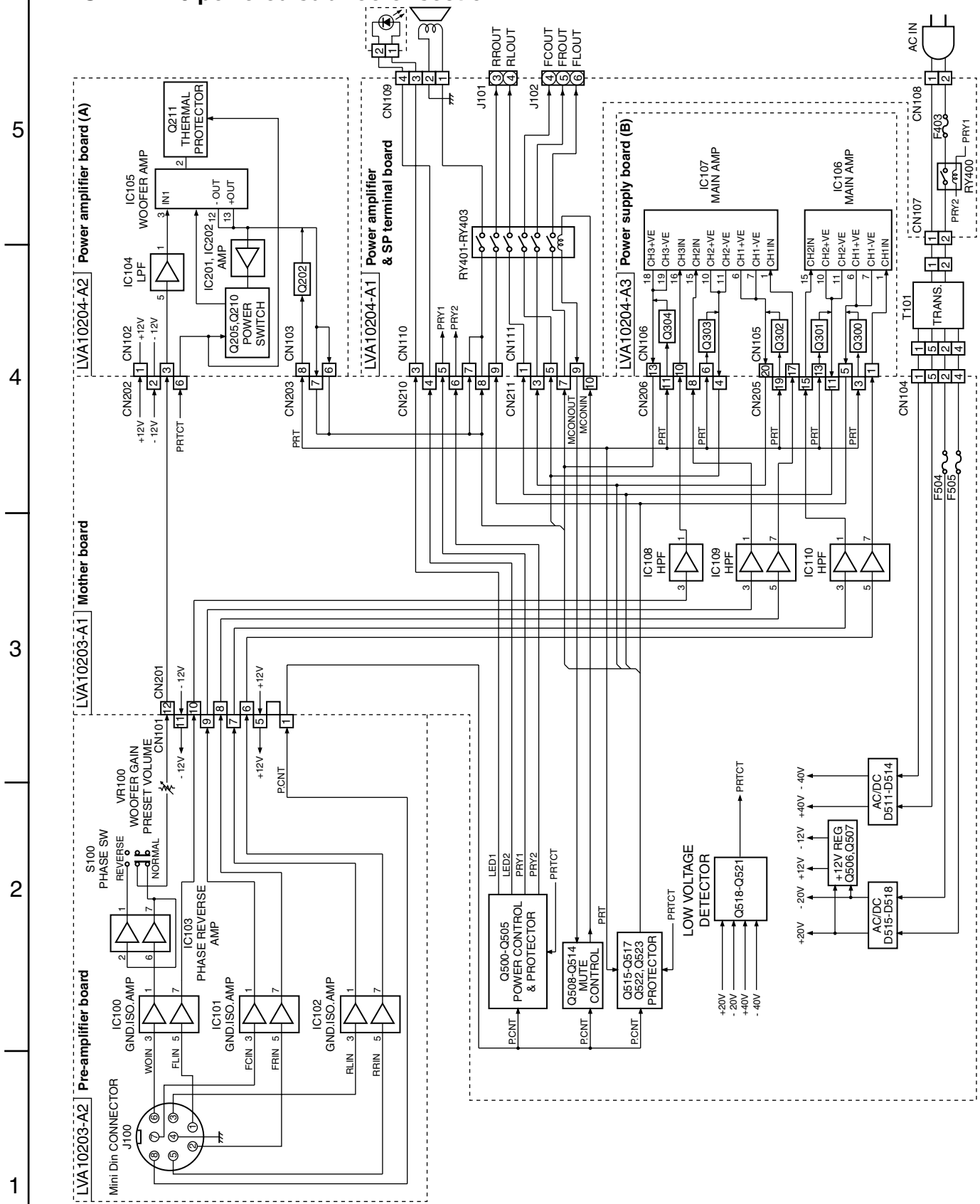


## ■ DVD servo section



# <Speaker section>

## ■ SP-THV70 powered subwoofer section

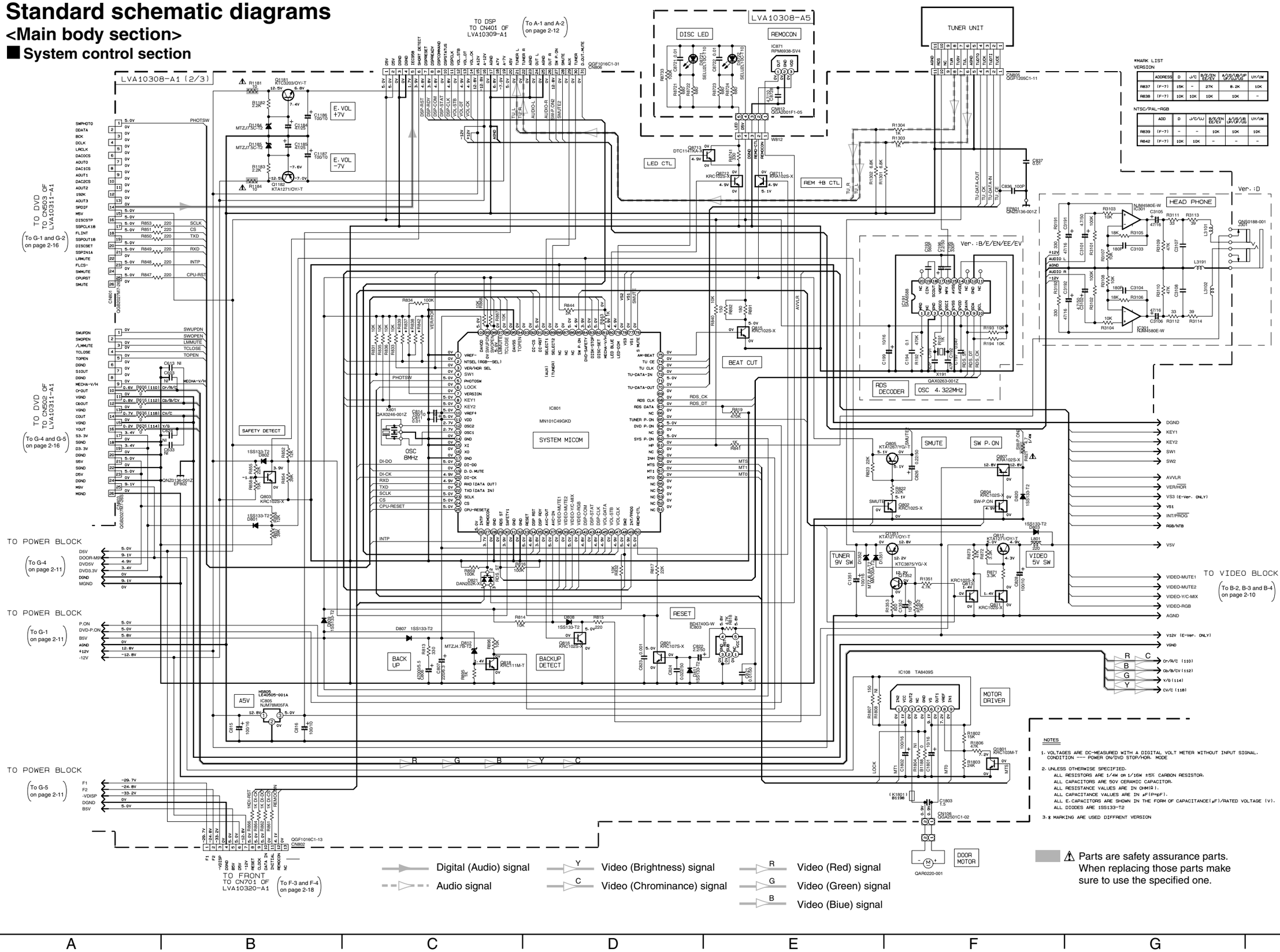


**< MEMO >**

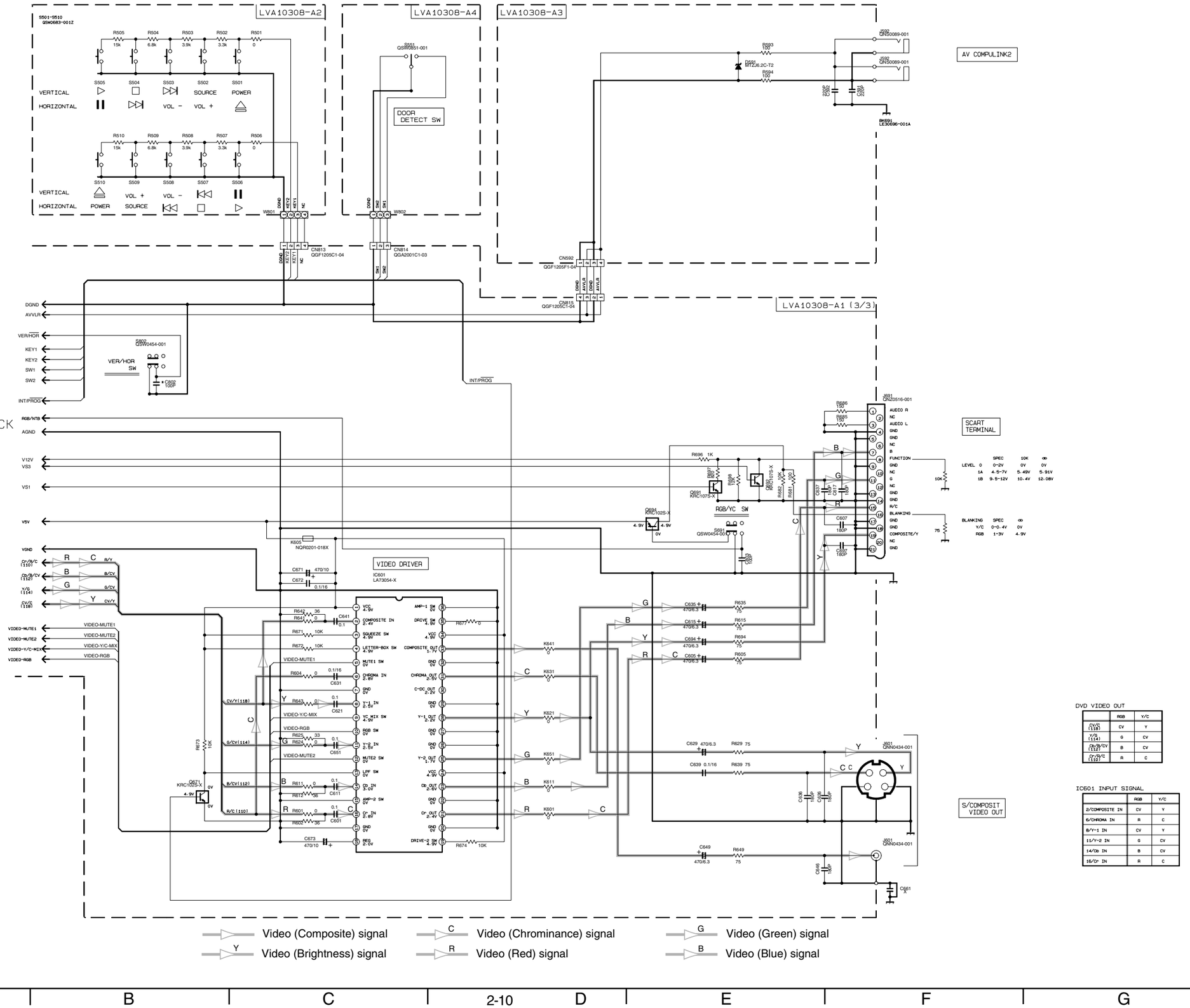
# Standard schematic diagrams

## <Main body section>

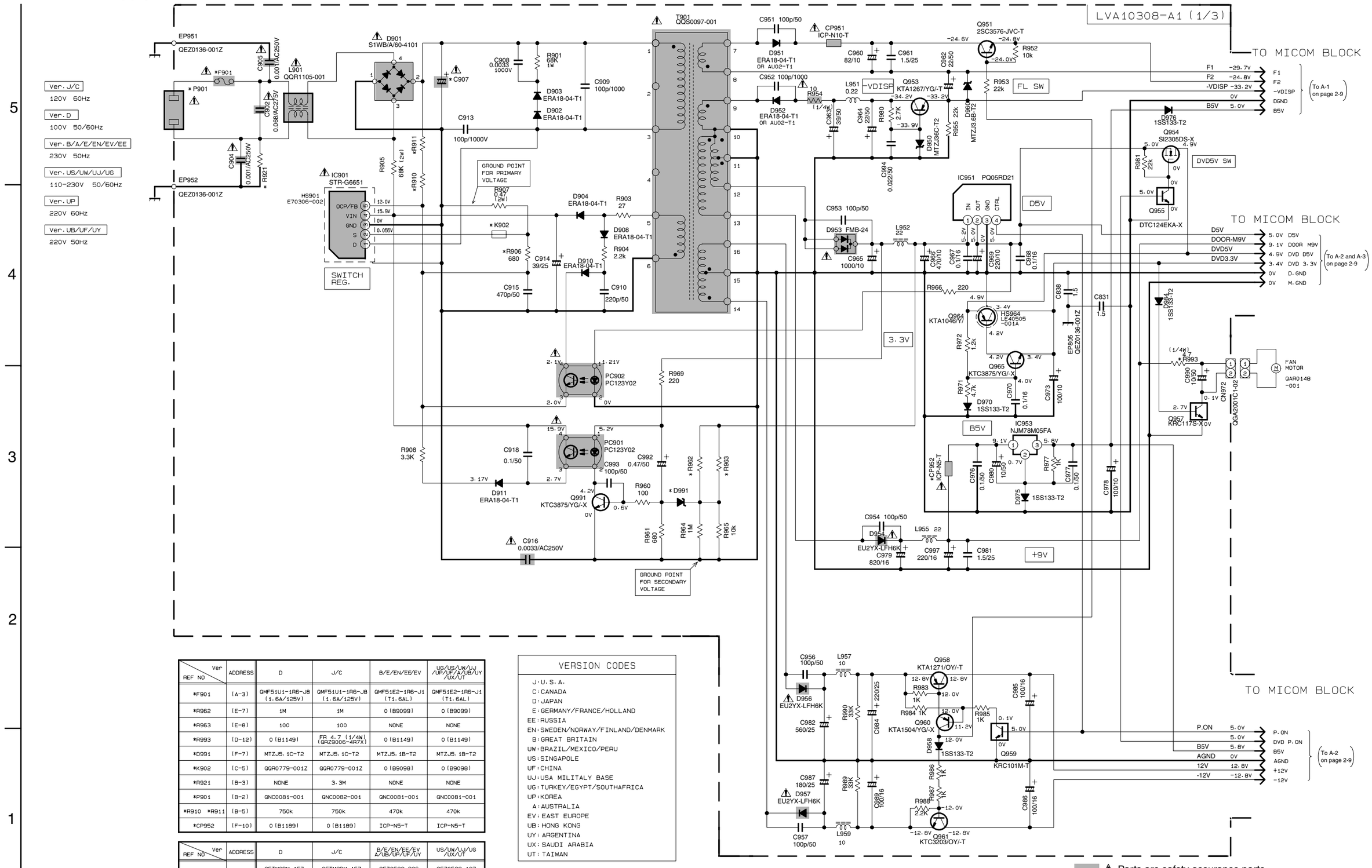
### ■ System control section



## ■ Video output section



## ■ Power supply section




| REF NO \ Ver | ADDRESS | D | J/C | B/E/EN/EE/EV | US/UW/UJ/UG /UP/UF/UB/UY /UX/UT |
|---|---|---|---|---|---|
| *F901 | (A-3) | QMF51U1-1R6-J8 (1.6A/125V) | QMF51U1-1R6-J8 (1.6A/125V) | QMF51E2-1R6-J1 (T1.6AL) | QMF51E2-1R6-J1 (T1.6AL) |
| *R962 | (E-7) | 1M | 1M | 0 (B9099) | 0 (B9099) |
| *R963 | (E-8) | 100 | 100 | NONE | NONE |
| *R993 | (D-12) | 0 (B1149) | FR 4.7 (1/4W) (QRZ9006-4R7X) | 0 (B1149) | 0 (B1149) |
| *D991 | (F-7) | MTZJ5.1C-T2 | MTZJ5.1C-T2 | MTZJ5.1B-T2 | MTZJ5.1B-T2 |
| *K902 | (C-5) | QQR0779-001Z | QQR0779-001Z | 0 (B9098) | 0 (B9098) |
| *R921 | (B-3) | NONE | 3.3M | NONE | NONE |
| *P901 | (B-2) | QNC0081-001 | QNC0082-001 | QNC0081-001 | QNC0081-001 |
| *R910 *R911 | (B-5) | 750k | 750k | 470k | 470k |
| *CP952 | (F-10) | 0 (B1189) | 0 (B1189) | ICP-N5-T | ICP-N5-T |

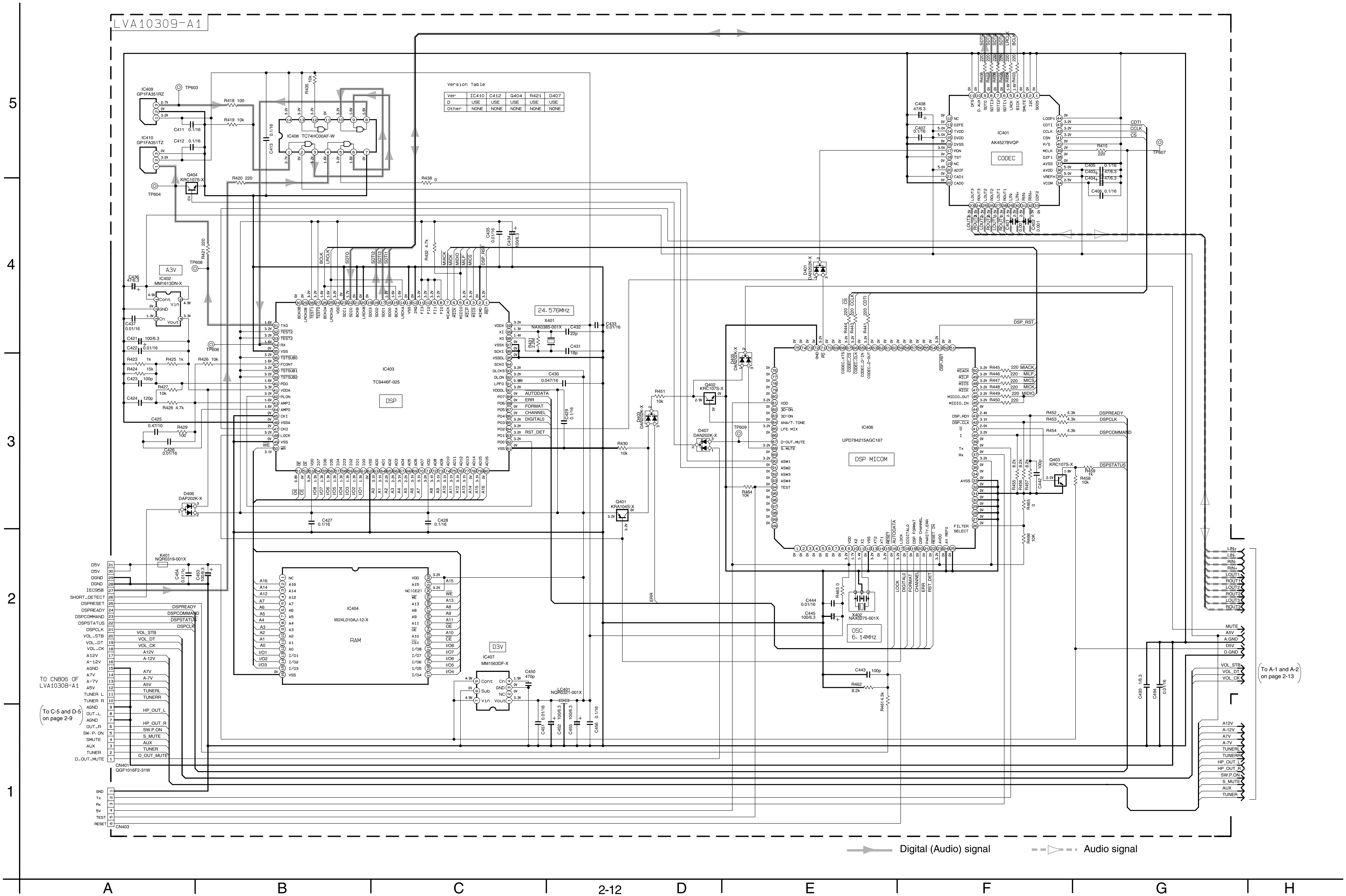
| REF NO \ Ver | ADDRESS | D | J/C | B/E/EN/EE/EV A/UB/UP/UF/UY | US/UW/UJ/UG /UX/UT |
|---|---|---|---|---|---|
| *C907 | (B-5) | QETM2DM-157 (150/200) | QETM2DM-157 (150/200) | QEZ0522-826 QEZ0374-826 (82/400) | QEZ0522-127 QEZ0445-127 (120/400) |

### VERSION CODES

J : U.S.A.
C : CANADA
D : JAPAN
E : GERMANY/FRANCE/HOLLAND
EE : RUSSIA
EN : SWEDEN/NORWAY/FINLAND/DENMARK
B : GREAT BRITAIN
UW : BRAZIL/MEXICO/PERU
US : SINGAPOLE
UF : CHINA
UJ : USA MILITALY BASE
UG : TURKEY/EGYPT/SOUTHAFRICA
UP : KOREA
A : AUSTRALIA
EV : EAST EUROPE
UB : HONG KONG
UY : ARGENTINA
UX : SAUDI ARABIA
UT : TAIWAN

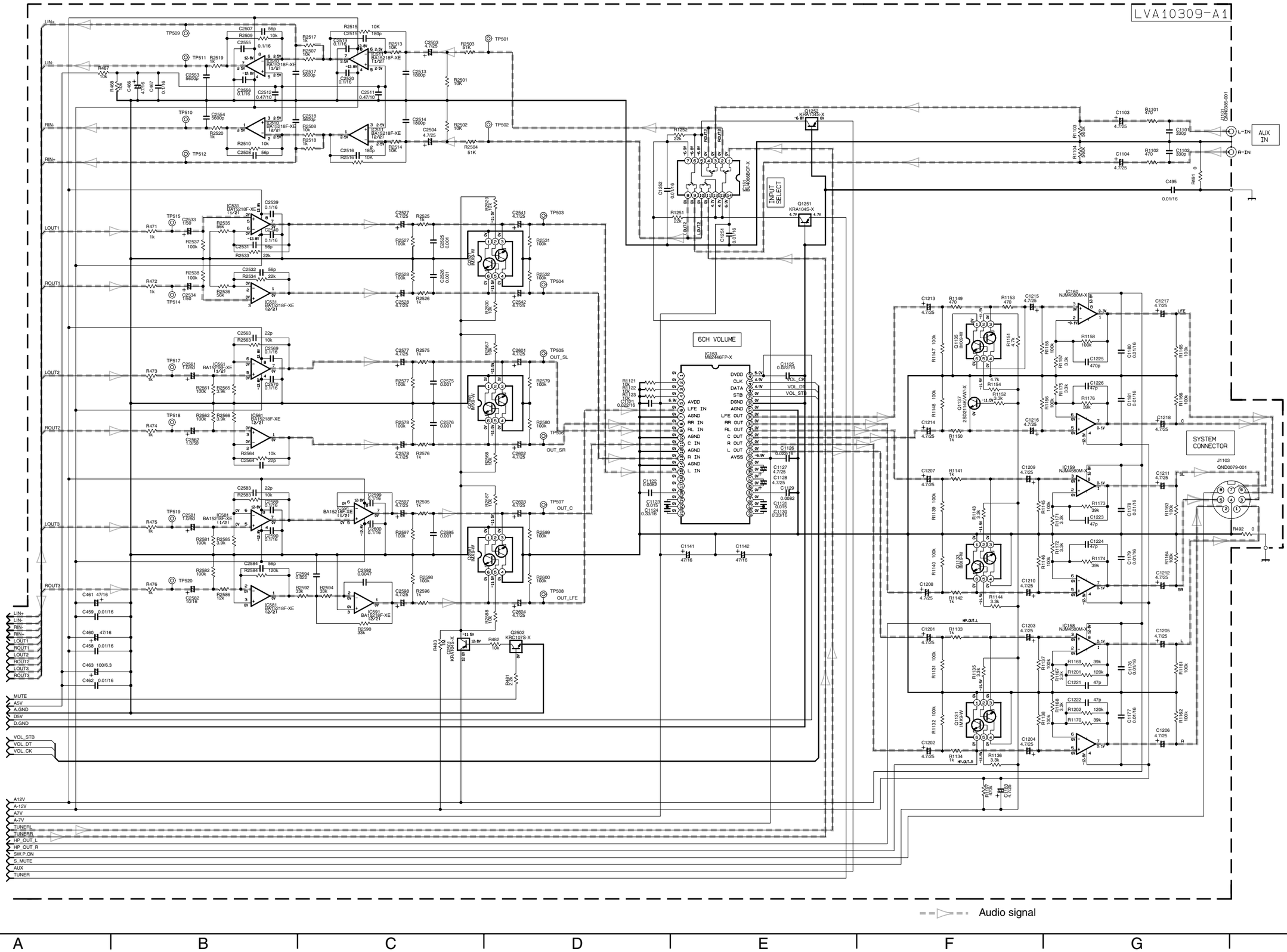
⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

## ■ DSP section



Digital (Audio) signal
Audio signal

## ■ Audio input/output section



## ■ DVD servo section 1/4

LVA10311-A1(1/3)

TO DVD TRAVERSE MECHA EXL-V9-1

TO DVD LOADER MECHA FLM-FD1-1

FRONT END PROCESSOR

IC101 AN8705FH-V

DRIVER

IC201 BA5983FM-X

SP MOTOR DRIVER

IC251 BA6664FM-X

SODC

IC301 MN103S2M3EGA

UNIT CPU

IC401 MN103LG3DLF3

16.9MHz

13.5MHz

IC457 S-93C56AJ-X

To A-5 on page 2-15

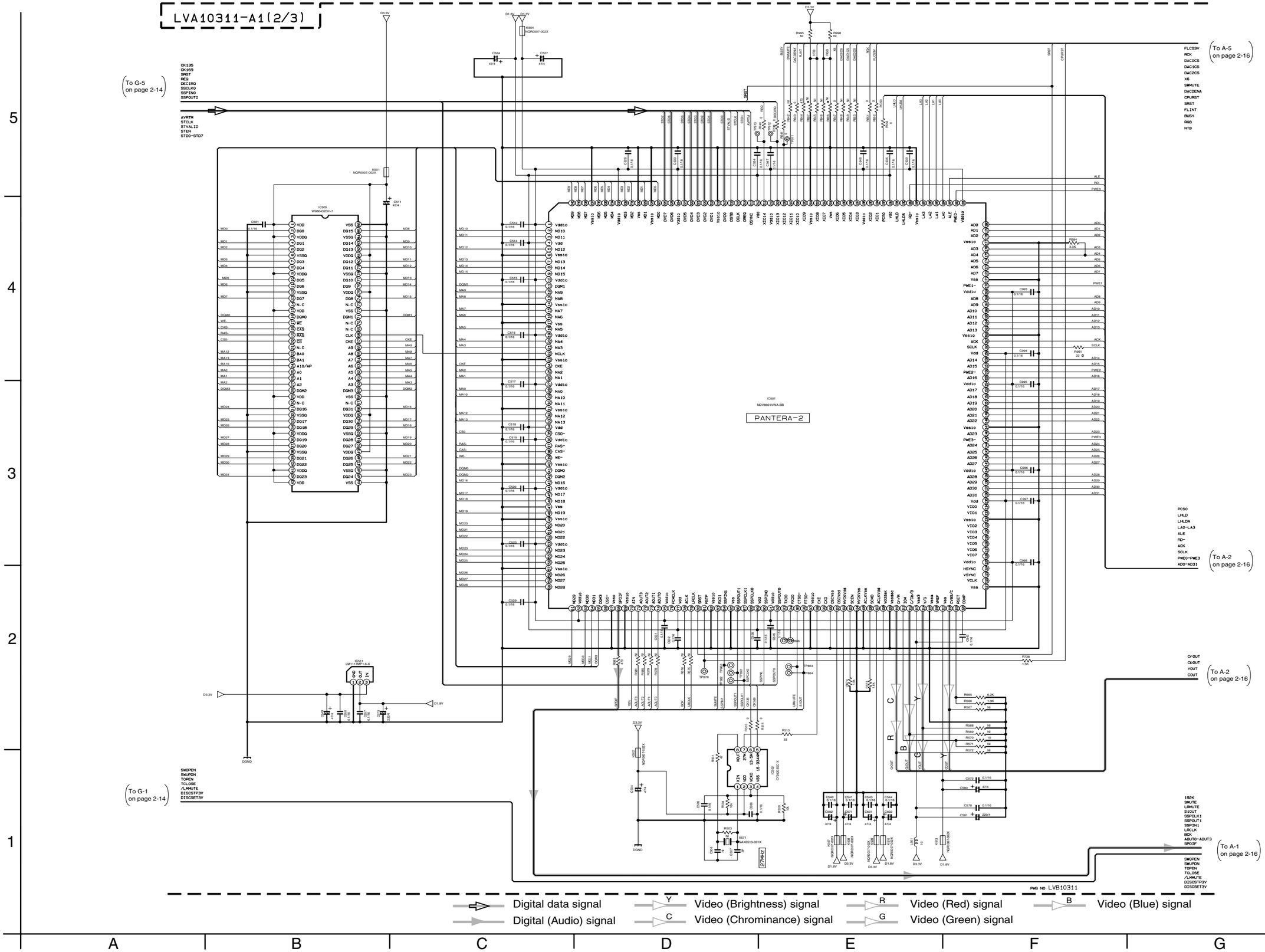
To A-1 on page 2-15

SWOPEN
SWUPDN
TOPEN
TCLOSE
/LMMUTE
DISCSTP3V
DISCSET3V

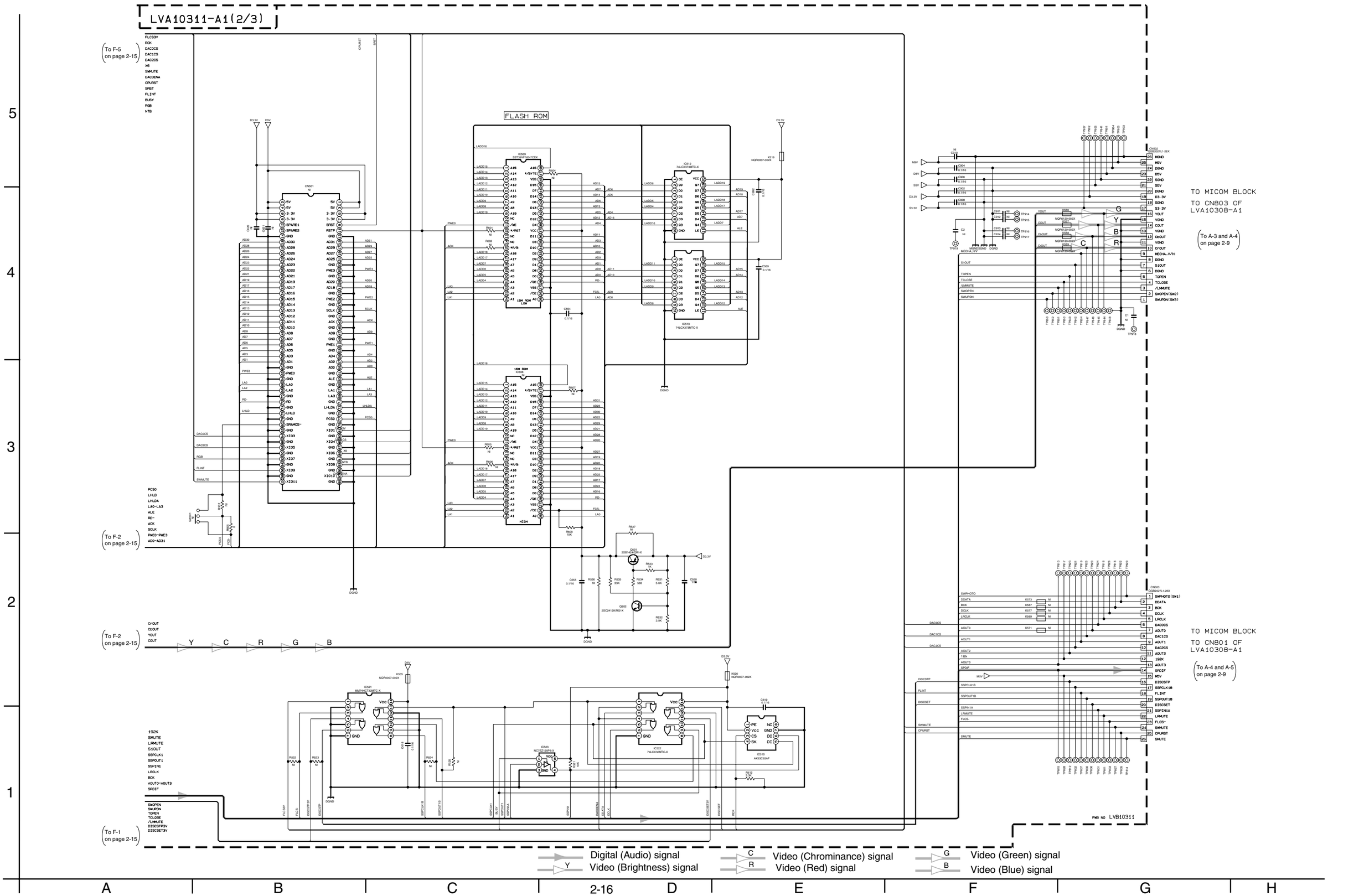
PWB NO LVB10311

Digital data signal

## ■ DVD servo section 2/4



## ■ DVD servo section 3/4



## ■ DVD servo section 4/4 (Voltage value)

IC101

| NO | DC(V) | NO | DC(V) |
|---|---|---|---|
| 1 | 0V | 51 | 2.1V |
| 2 | 4.4V | 52 | 2.1V |
| 3 | 3.7V | 53 | 2.1V |
| 4 | 4.4V | 54 | 2.1V |
| 5 | 0V | 55 | 4.9V |
| 6 | 1.7V | 56 | 2.1V |
| 7 | 1.7V | 57 | 2.1V |
| 8 | 1.9V | 58 | 2.1V |
| 9 | 3.3V | 59 | 2.1V |
| 10 | 0V | 60 | 2.1V |
| 11 | 3.3V | 61 | 0V |
| 12 | 3.3V | 62 | 2.1V |
| 13 | 3.3V | 63 | 2.1V |
| 14 | 3.3V | 64 | 0V |
| 15 | 0V | | |
| 16 | 1.7V | | |
| 17 | 1.5V | | |
| 18 | 1.7V | | |
| 19 | 1.7V | | |
| 20 | 0V | | |
| 21 | 1.7V | | |
| 22 | 0V | | |
| 23 | 1.7V | | |
| 24 | 0.9V | | |
| 25 | 1.7V | | |
| 26 | 0V | | |
| 27 | 0V | | |
| 28 | 4.9V | | |
| 29 | 1.7V | | |
| 30 | 0V | | |
| 31 | 0V | | |
| 32 | 0V | | |
| 33 | 0V | | |
| 34 | 0V | | |
| 35 | 0.9V | | |
| 36 | 3.3V | | |
| 37 | 1.3V | | |
| 38 | 0.9V | | |
| 39 | 3.3V | | |
| 40 | 3.3V | | |
| 41 | 1.7V | | |
| 42 | 1.7V | | |
| 43 | 1.7V | | |
| 44 | 1.0V | | |
| 45 | 1.7V | | |
| 46 | 2.1V | | |
| 47 | 2.1V | | |
| 48 | 2.1V | | |
| 49 | 2.1V | | |
| 50 | 2.1V | | |

IC201

| NO | DC(V) |
|---|---|
| 1 | 1.7V |
| 2 | 1.7V |
| 3 | 1.7V |
| 4 | 1.7V |
| 5 | 1.7V |
| 6 | 1.7V |
| 7 | 1.7V |
| 8 | 0V |
| 9 | 3.2V |
| 10 | 5.0V |
| 11 | 2.5V |
| 12 | 2.5V |
| 13 | 2.5V |
| 14 | 2.5V |
| 15 | 4.3V |
| 16 | 4.3V |
| 17 | 4.3V |
| 18 | 4.3V |
| 19 | 9.2V |
| 20 | 0V |
| 21 | 0V |
| 22 | 1.7V |
| 23 | 1.7V |
| 24 | 1.7V |
| 25 | 0V |
| 26 | 0V |
| 27 | 1.7V |
| 28 | 9.2V |
| 29 | 1.7V |
| 30 | 9.2V |

IC251

| NO | DC(V) |
|---|---|
| 1 | 0.8V |
| 2 | 0.8V |
| 3 | 0.8V |
| 4 | 0.8V |
| 5 | 0V |
| 6 | 0V |
| 7 | 0.8V |
| 8 | 0V |
| 9 | 5.0V |
| 10 | 5.0V |
| 11 | 5.0V |
| 12 | 5.0V |
| 13 | 5.0V |
| 14 | 5.0V |
| 15 | 0V |
| 16 | 0V |
| 17 | 0V |
| 18 | 0V |
| 19 | 5.0V |
| 20 | 5.0V |
| 21 | 1.67V |
| 22 | 1.67V |
| 23 | 0V |
| 24 | 3.3V |
| 25 | 5.0V |
| 26 | 0V |
| 27 | 9.2V |
| 28 | 9.2V |
| 29 | 0V |
| 30 | 0V |

IC301

| NO | DC(V) | NO | DC(V) | NO | DC(V) | NO | DC(V) |
|---|---|---|---|---|---|---|---|
| 1 | 0V | 51 | 3.3V | 101 | 0.7V | 151 | 0V |
| 2 | 2.9V | 52 | 3.3V | 102 | 0V | 152 | 1.7V |
| 3 | 3.3V | 53 | —— | 103 | 1.4V | 153 | 0V |
| 4 | 0V | 54 | —— | 104 | 2.1V | 154 | 1.7V |
| 5 | 3.3V | 55 | —— | 105 | —— | 155 | 0V |
| 6 | 3.3V | 56 | —— | 106 | 1.7V | 156 | 3.3V |
| 7 | —— | 57 | 3.3V | 107 | 0.7V | 157 | 0V |
| 8 | 0V | 58 | 1.7V | 108 | 0.7V | 158 | 0V |
| 9 | 0V | 59 | 0V | 109 | 3.3V | 159 | 0V |
| 10 | 0V | 60 | 0V | 110 | 1.7V | 160 | 0V |
| 11 | 3.3V | 61 | —— | 111 | 1.7V | 161 | 0V |
| 12 | 3.3V | 62 | —— | 112 | 0V | 162 | 3.3V |
| 13 | 3.3V | 63 | —— | 113 | 0V | 163 | 0V |
| 14 | 0V | 64 | —— | 114 | 1.7V | 164 | 0V |
| 15 | 1.4V | 65 | 1.7V | 115 | 1.7V | 165 | 0V |
| 16 | 0.3V | 66 | 1.7V | 116 | 3.3V | 166 | 0V |
| 17 | 1.4V | 67 | 1.7V | 117 | 1.7V | 167 | 0V |
| 18 | 1.7V | 68 | 1.7V | 118 | 1.7V | 168 | 0V |
| 19 | 0V | 69 | 3.3V | 119 | 1.7V | 169 | 3.3V |
| 20 | 1.7V | 70 | —— | 120 | 1.7V | 170 | 0V |
| 21 | 0V | 71 | —— | 121 | 2.1V | 171 | 0V |
| 22 | 2.2V | 72 | —— | 122 | 1.7V | 172 | 3.3V |
| 23 | 2.2V | 73 | —— | 123 | 2.1V | 173 | 0V |
| 24 | 1.7V | 74 | —— | 124 | —— | 174 | 4.9V |
| 25 | 1.5V | 75 | —— | 125 | 3.3V | 175 | 4.9V |
| 26 | 1.5V | 76 | 1.7V | 126 | 0V | 176 | 3.3V |
| 27 | 1.5V | 77 | 0V | 127 | 0V | | |
| 28 | 1.5V | 78 | 3.3V | 128 | 0V | | |
| 29 | 1.5V | 79 | 1.7V | 129 | 0V | | |
| 30 | 0.5V | 80 | —— | 130 | 0V | | |
| 31 | 3.3V | 81 | 0V | 131 | 3.3V | | |
| 32 | 0V | 82 | 0.8V | 132 | 0V | | |
| 33 | 3.3V | 83 | 2.1V | 133 | 0V | | |
| 34 | 3.3V | 84 | 1.7V | 134 | 0V | | |
| 35 | 3.3V | 85 | 0V | 135 | 0V | | |
| 36 | 3.3V | 86 | —— | 136 | 1.7V | | |
| 37 | 0V | 87 | —— | 137 | 3.3V | | |
| 38 | 0V | 88 | 3.3V | 138 | 0V | | |
| 39 | 0V | 89 | 0V | 139 | 3.3V | | |
| 40 | 0V | 90 | 1.7V | 140 | 0V | | |
| 41 | 0V | 91 | —— | 141 | 0V | | |
| 42 | 0V | 92 | —— | 142 | 0V | | |
| 43 | 1.0V | 93 | 1.7V | 143 | 3.3V | | |
| 44 | 0V | 94 | 0V | 144 | 0V | | |
| 45 | —— | 95 | —— | 145 | —— | | |
| 46 | 0V | 96 | 1.7V | 146 | 1.7V | | |
| 47 | 3.3V | 97 | 1.7V | 147 | 3.3V | | |
| 48 | 0V | 98 | —— | 148 | —— | | |
| 49 | —— | 99 | 3.3V | 149 | 0V | | |
| 50 | —— | 100 | 0.7V | 150 | 0V | | |

IC401

| NO | DC(V) | NO | DC(V) |
|---|---|---|---|
| 1 | 3.3V | 51 | —— |
| 2 | 3.3V | 52 | 0V |
| 3 | 0V | 53 | 3.3V |
| 4 | 3.3V | 54 | 3.3V |
| 5 | —— | 55 | 3.3V |
| 6 | 3.3V | 56 | 3.3V |
| 7 | —— | 57 | —— |
| 8 | 0V | 58 | 3.3V |
| 9 | 3.3V | 59 | 0V |
| 10 | 0V | 60 | —— |
| 11 | 3.3V | 61 | 0V |
| 12 | 3.3V | 62 | 0V |
| 13 | 1.5V | 63 | 0V |
| 14 | 1.5V | 64 | 0V |
| 15 | 1.5V | 65 | 0V |
| 16 | 1.5V | 66 | 3.3V |
| 17 | 3.3V | 67 | 3.3V |
| 18 | —— | 68 | 0V |
| 19 | 0V | 69 | 3.3V |
| 20 | 0V | 70 | 3.3V |
| 21 | —— | 71 | 0V |
| 22 | 3.3V | 72 | 3.3V |
| 23 | 1.7V | 73 | 3.3V |
| 24 | 1.7V | 74 | 3.3V |
| 25 | 5.0V | 75 | 3.3V |
| 26 | 3.3V | 76 | 3.3V |
| 27 | 0V | 77 | 0V |
| 28 | 3.3V | 78 | 0V |
| 29 | 3.3V | 79 | 0V |
| 30 | 3.3V | 80 | 0V |
| 31 | 3.3V | 81 | 3.3V |
| 32 | 0V | 82 | 3.3V |
| 33 | 3.3V | 83 | 3.3V |
| 34 | 3.3V | 84 | 3.3V |
| 35 | 0V | 85 | 3.3V |
| 36 | 3.3V | 86 | 3.3V |
| 37 | 3.3V | 87 | 3.3V |
| 38 | 3.3V | 88 | 3.3V |
| 39 | 0V | 89 | 3.3V |
| 40 | 0V | 90 | 3.3V |
| 41 | —— | 91 | 3.3V |
| 42 | —— | 92 | 0V |
| 43 | 0V | 93 | 0V |
| 44 | —— | 94 | 0V |
| 45 | 3.3V | 95 | 0V |
| 46 | 0V | 96 | 0V |
| 47 | 0V | 97 | 0V |
| 48 | 3.3V | 98 | 0V |
| 49 | 3.3V | 99 | 0V |
| 50 | 3.3V | 100 | 0V |

IC451

| NO | DC(V) |
|---|---|
| 1 | 0V |
| 2 | 3.2V |
| 3 | 0V |
| 4 | 0V |
| 5 | 0V |
| 6 | 0V |
| 7 | 0V |
| 8 | 0V |

IC501

| NO | DC(V) | NO | DC(V) | NO | DC(V) | NO | DC(V) | NO | DC(V) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.2V | 53 | 3.2V | 105 | 0V | 157 | 0V | 209 | 0V |
| 2 | 0.5V | 54 | 0.4V | 106 | 0V | 158 | 0V | 210 | 3.2V |
| 3 | 0.4V | 55 | 0.4V | 107 | 3.2V | 159 | 1.7V | 211 | 0V |
| 4 | 1.8V | 56 | 0.4V | 108 | 1.7V | 160 | 1.7V | 212 | 1.7V |
| 5 | 0.4V | 57 | 0V | 109 | 0V | 161 | 3.2V | 213 | 3.2V |
| 6 | 0V | 58 | 0.4V | 110 | 0V | 162 | 0V | 214 | 3.2V |
| 7 | 0.4V | 59 | 0.4V | 111 | 1.0V | 163 | 0V | 215 | 0V |
| 8 | 0.4V | 60 | 0.4V | 112 | 1.0V | 164 | 0V | 216 | 0V |
| 9 | 0V | 61 | 0.5V | 113 | 3.1V | 165 | 0V | 217 | 3.2V |
| 10 | 3.2V | 62 | 3.2V | 114 | 0.4V | 166 | 0V | 218 | 0V |
| 11 | 0V | 63 | 0.5V | 115 | 0.4V | 167 | 0V | 219 | 3.2V |
| 12 | 0V | 64 | 3.2V | 116 | —— | 168 | 0V | 220 | 3.2V |
| 13 | 0V | 65 | 1.0V | 117 | 3.1V | 169 | 3.2V | 221 | 0V |
| 14 | 0V | 66 | —— | 118 | 0.6V | 170 | 3.2V | 222 | 3.2V |
| 15 | 2.0V | 67 | 0V | 119 | 1.3V | 171 | 0V | 223 | 3.2V |
| 16 | 1.3V | 68 | 1.7V | 120 | 1.8V | 172 | 0V | 224 | 3.2V |
| 17 | 0V | 69 | 0V | 121 | 0V | 173 | 0V | 225 | 0V |
| 18 | 0.4V | 70 | 3.2V | 122 | 0V | 174 | 0V | 226 | 0V |
| 19 | 3.2V | 71 | 0V | 123 | 0V | 175 | 0V | 227 | 0.8V |
| 20 | 1.4V | 72 | 0V | 124 | 0V | 176 | 0V | 228 | 0V |
| 21 | 1.7V | 73 | 0V | 125 | 3.2V | 177 | 0V | 229 | 0.8V |
| 22 | 1.7V | 74 | 0V | 126 | 0V | 178 | 0V | 230 | 0V |
| 23 | 0V | 75 | 3.2V | 127 | 0V | 179 | 0V | 231 | 0.8V |
| 24 | 3.2V | 76 | —— | 128 | 0V | 180 | 0V | 232 | 0.6V |
| 25 | 0.5V | 77 | 1.7V | 129 | 0V | 181 | 3.2V | 233 | 3.2V |
| 26 | 2.5V | 78 | 1.7V | 130 | 0V | 182 | 3.2V | 234 | 0.6V |
| 27 | 3.2V | 79 | 1.7V | 131 | 0V | 183 | 0V | 235 | 0.8V |
| 28 | 1.2V | 80 | 0V | 132 | 0V | 184 | 0V | 236 | 1.0V |
| 29 | 0V | 81 | 0V | 133 | 0V | 185 | 3.2V | 237 | 0V |
| 30 | 0V | 82 | 0V | 134 | 0V | 186 | 0V | 238 | 0.4V |
| 31 | 0V | 83 | 3.2V | 135 | 1.8V | 187 | 0V | 239 | 0.8V |
| 32 | 2.0V | 84 | 0.4V | 136 | 0V | 188 | 0V | 240 | 0.8V |
| 33 | 1.3V | 85 | 0V | 137 | 0V | 189 | 3.2V | | |
| 34 | 1.7V | 86 | 3.2V | 138 | 0V | 190 | 0V | | |
| 35 | 2.2V | 87 | 0V | 139 | 0V | 191 | 0V | | |
| 36 | 3.1V | 88 | 1.7V | 140 | 3.2V | 192 | 1.7V | | |
| 37 | 3.2V | 89 | 0V | 141 | 0V | 193 | 3.2V | | |
| 38 | 0V | 90 | 0V | 142 | 0V | 194 | 3.2V | | |
| 39 | 3.2V | 91 | 1.2V | 143 | 0V | 195 | 0V | | |
| 40 | 0V | 92 | 0V | 144 | 0V | 196 | 3.2V | | |
| 41 | 0V | 93 | 0V | 145 | 3.2V | 197 | 3.2V | | |
| 42 | 0V | 94 | 0.6V | 146 | 0V | 198 | 3.2V | | |
| 43 | 0.7V | 95 | 0V | 147 | 0V | 199 | 3.2V | | |
| 44 | 3.2V | 96 | 0V | 148 | 0V | 200 | 3.2V | | |
| 45 | 0.7V | 97 | 0V | 149 | 0V | 201 | 0V | | |
| 46 | 0.5V | 98 | 1.7V | 150 | 0V | 202 | 3.2V | | |
| 47 | 0V | 99 | —— | 151 | 0V | 203 | 3.2V | | |
| 48 | 0.5V | 100 | —— | 152 | 0V | 204 | 0V | | |
| 49 | 0V | 101 | 1.7V | 153 | 0V | 205 | 4.9V | | |
| 50 | 0.4V | 102 | 3.2V | 154 | 3.2V | 206 | 3.2V | | |
| 51 | 0.4V | 103 | 0V | 155 | 0V | 207 | 0V | | |
| 52 | 0.4V | 104 | 0V | 156 | 3.2V | 208 | 3.2V | | |

IC502

| NO | DC(V) |
|---|---|
| 1 | 1.5V |
| 2 | 3.3V |
| 3 | 1.7V |
| 4 | 0V |
| 5 | 1.7V |
| 6 | 1.7V |
| 7 | 1.7V |
| 8 | 1.7V |

IC505

| NO | DC(V) | NO | DC(V) |
|---|---|---|---|
| 1 | 3.2V | 51 | 0.5V |
| 2 | 0.8V | 52 | 0V |
| 3 | 3.2V | 53 | 0.5V |
| 4 | 0.8V | 54 | 0.7V |
| 5 | 0.8V | 55 | 3.2V |
| 6 | 0V | 56 | 0.7V |
| 7 | 0.6V | 57 | 0.6V |
| 8 | 0.6V | 58 | 0V |
| 9 | 3.2V | 59 | 0V |
| 10 | 0.8V | 60 | 1.7V |
| 11 | 1.0V | 61 | 1.4V |
| 12 | 0V | 62 | 0.4V |
| 13 | 0.4V | 63 | 1.3V |
| 14 | —— | 64 | 1.3V |
| 15 | 3.2V | 65 | 2.0V |
| 16 | 0V | 66 | 0V |
| 17 | 3.2V | 67 | 3.2V |
| 18 | 0V | 68 | 1.7V |
| 19 | 3.2V | 69 | —— |
| 20 | 2.2V | 70 | —— |
| 21 | —— | 71 | 0V |
| 22 | 2.0V | 72 | 0V |
| 23 | 1.3V | 73 | —— |
| 24 | 0V | 74 | 0V |
| 25 | 1.2V | 75 | 3.2V |
| 26 | 2.5V | 76 | 0.4V |
| 27 | 0.5V | 77 | 0.4V |
| 28 | 1.0V | 78 | 0V |
| 29 | 3.2V | 79 | 0V |
| 30 | —— | 80 | 0.4V |
| 31 | 0.4V | 81 | 3.2V |
| 32 | 0V | 82 | 0.5V |
| 33 | 0.4V | 83 | 0.8V |
| 34 | 0.4V | 84 | 0V |
| 35 | 3.2V | 85 | 0.8V |
| 36 | 0.4V | 86 | 0V |
| 37 | 0.4V | 87 | |
| 38 | 0V | 88 | |
| 39 | 0.5V | 89 | |
| 40 | 0.5V | 90 | |
| 41 | 3.2V | 91 | |
| 42 | 3.2V | 92 | |
| 43 | 3.2V | 93 | |
| 44 | 0V | 94 | |
| 45 | 0.4V | 95 | |
| 46 | 0V | 96 | |
| 47 | 0.4V | 97 | |
| 48 | 0.4V | 98 | |
| 49 | 3.2V | 99 | |
| 50 | 0.4V | 100 | |

IC509

| NO | DC(V) |
|---|---|
| 1 | 0V |
| 2 | 0V |
| 3 | 0V |
| 4 | 0V |
| 5 | 0V |
| 6 | 0V |
| 7 | 0V |
| 8 | 0V |
| 9 | 0V |
| 10 | —— |
| 11 | 3.2V |
| 12 | 0V |
| 13 | —— |
| 14 | —— |
| 15 | 0V |
| 16 | 0V |
| 17 | 0V |
| 18 | 0V |
| 19 | 0V |
| 20 | 0V |
| 21 | 0V |
| 22 | 0V |
| 23 | 0V |
| 24 | 3.2V |
| 25 | 0V |
| 26 | 3.2V |
| 27 | 0V |
| 28 | 3.2V |
| 29 | 0V |
| 30 | 0V |
| 31 | 0V |
| 32 | 0V |
| 33 | 0V |
| 34 | 0V |
| 35 | 0V |
| 36 | 0V |
| 37 | 3.2V |
| 38 | 0V |
| 39 | 0V |
| 40 | 0V |
| 41 | 0V |
| 42 | 0V |
| 43 | 0V |
| 44 | 0V |
| 45 | 0V |
| 46 | 0V |
| 47 | 0V |
| 48 | 0V |

IC510

| NO | DC(V) |
|---|---|
| 1 | 0V |
| 2 | 3.2V |
| 3 | 0V |
| 4 | 3.2V |
| 5 | 3.2V |
| 6 | 3.2V |
| 7 | 0V |
| 8 | 0V |

IC511

| NO | DC(V) |
|---|---|
| 1 | 0V |
| 2 | 1.8V |
| 3 | 3.2V |

IC512

| NO | DC(V) |
|---|---|
| 1 | 0V |
| 2 | 0V |
| 3 | 0V |
| 4 | 0V |
| 5 | 0V |
| 6 | 0V |
| 7 | 0V |
| 8 | 0V |
| 9 | 0V |
| 10 | 0V |
| 11 | 0V |
| 12 | 0V |
| 13 | 0V |
| 14 | 0V |
| 15 | 0V |
| 16 | 0V |
| 17 | 0V |
| 18 | 0V |
| 19 | 0V |
| 20 | 3.2V |

IC513

| NO | DC(V) |
|---|---|
| 1 | 0V |
| 2 | 0V |
| 3 | 0V |
| 4 | 0V |
| 5 | 0V |
| 6 | 0V |
| 7 | 0V |
| 8 | 0V |
| 9 | 0V |
| 10 | 0V |
| 11 | 0V |
| 12 | 0V |
| 13 | 0V |
| 14 | 0V |
| 15 | 0V |
| 16 | 0V |
| 17 | 0V |
| 18 | 0V |
| 19 | 0V |
| 20 | 3.2V |

IC521

| NO | DC(V) |
|---|---|
| 1 | 3.2V |
| 2 | 0V |
| 3 | 5.0V |
| 4 | 3.2V |
| 5 | 0V |
| 6 | 5.0V |
| 7 | 0V |
| 8 | 5.0V |
| 9 | 0V |
| 10 | 3.2V |
| 11 | 5.0V |
| 12 | 0V |
| 13 | 3.2V |
| 14 | 5.0V |

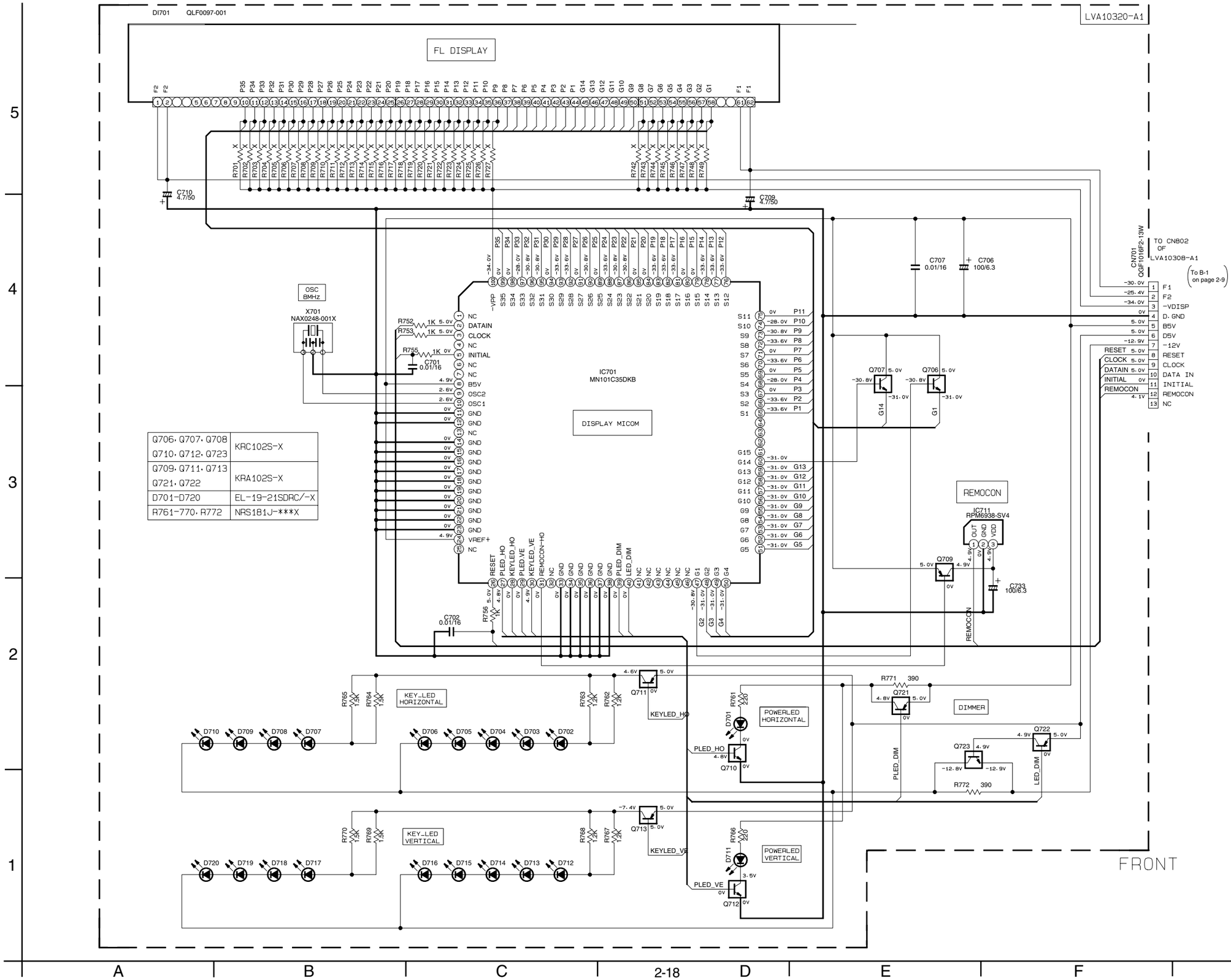
IC522

| NO | DC(V) |
|---|---|
| 1 | 3.2V |
| 2 | 3.2V |
| 3 | 3.2V |
| 4 | 3.2V |
| 5 | 3.2V |
| 6 | 3.2V |
| 7 | 0V |
| 8 | 0V |
| 9 | 3.2V |
| 10 | 3.2V |
| 11 | 3.2V |
| 12 | 0V |
| 13 | 5.0V |
| 14 | 3.2V |

NOTES

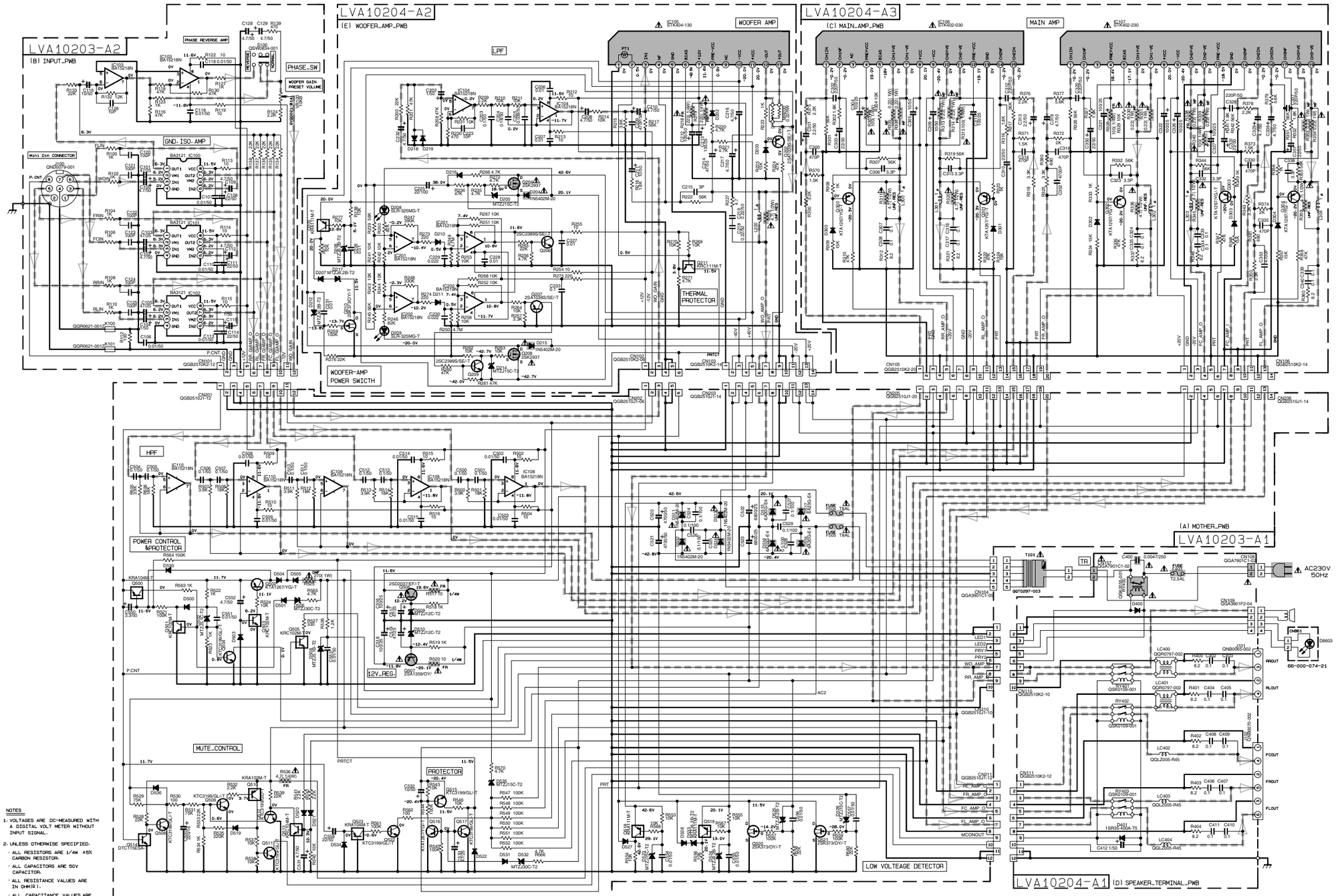
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. ___ CONDITION --- POWER ON DVD STOP

## ■ FL display section



## <Speaker section>

### ■ Powered subwoofer section



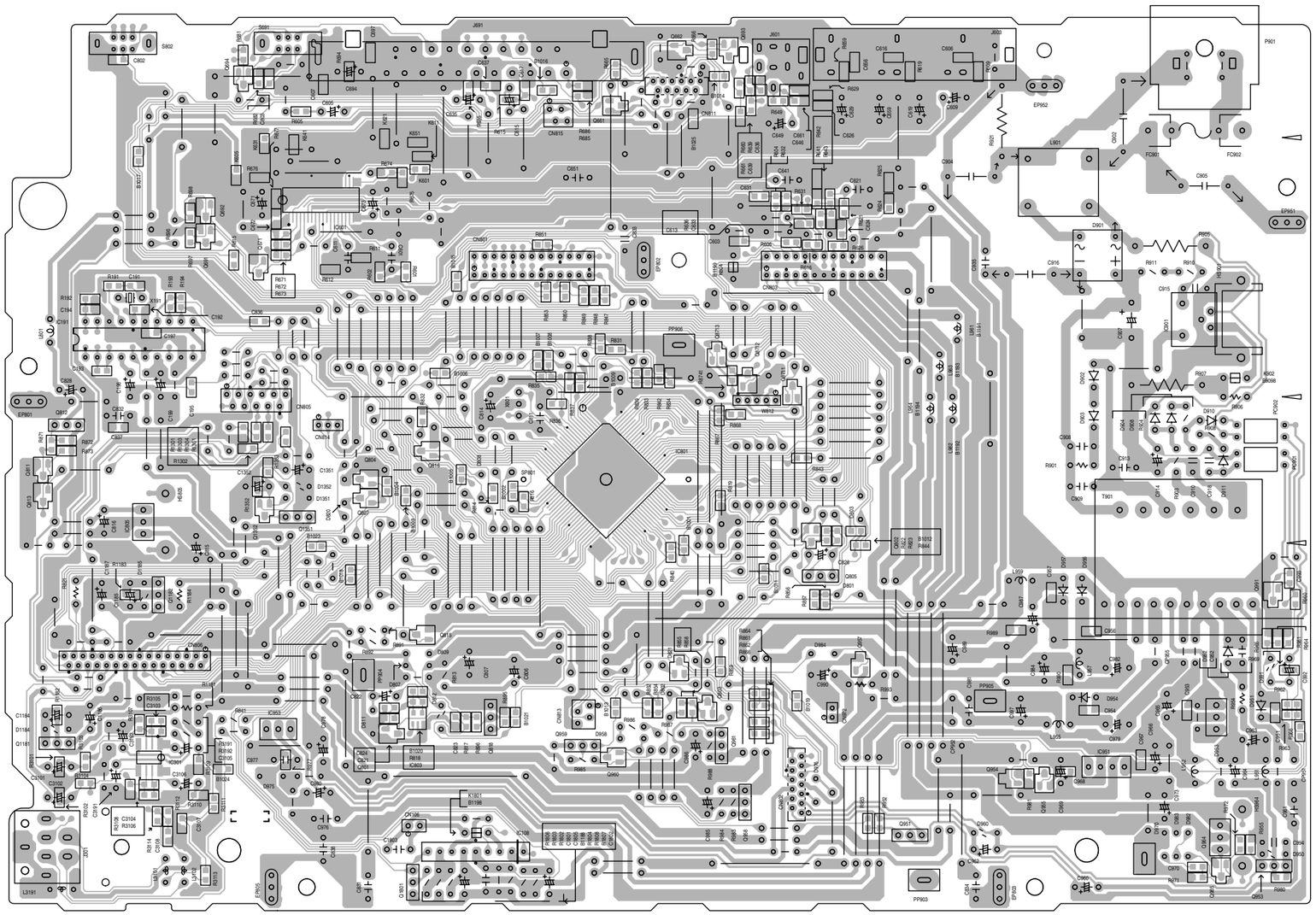

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
2. UNLESS OTHERWISE SPECIFIED.
   - ALL RESISTORS ARE 1/4W ±5% CARBON RESISTOR.
   - ALL CAPACITORS ARE 50V CAPACITOR.
   - ALL RESISTANCE VALUES ARE IN Ω=Ω(Ω).
   - ALL CAPACITANCE VALUES ARE IN #F(P=pF).
   - ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(#F) /RATED VOLTAGE(V).
   - ALL DIODES ARE 1SS133-T2.
3. ⚠ MARKING ARE USED DIFFERENT VERSION.

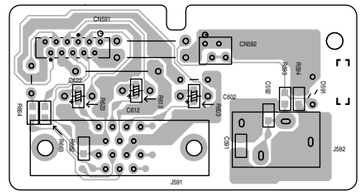
# Printed circuit boards

## <Main body section>

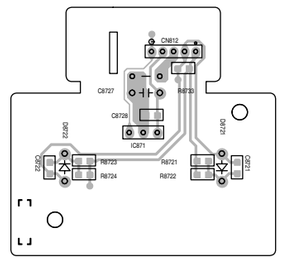
### ■ Main board



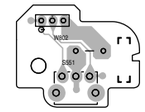
(Main board)



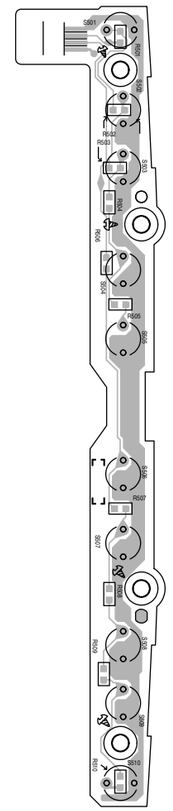
(Compulink board)



(LED board)



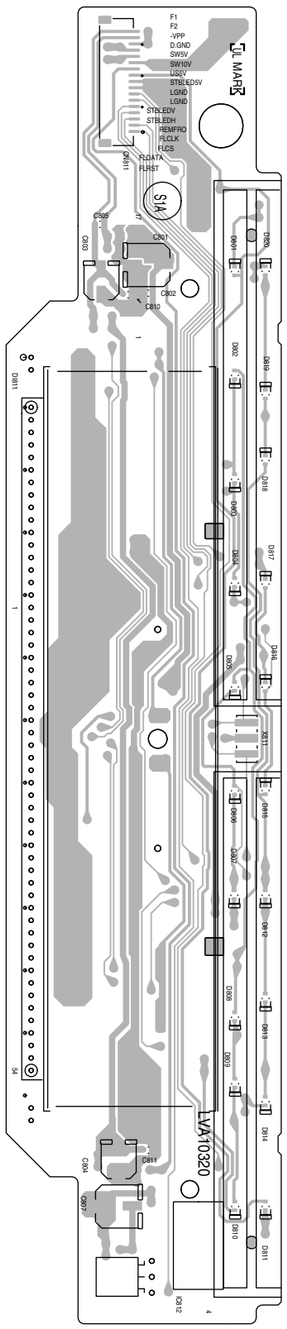
(Open/Close board)



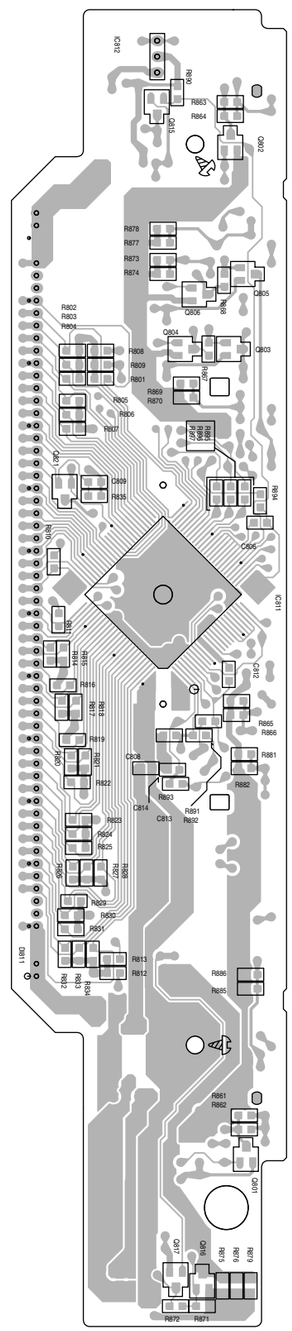
(Switch board)

## ■ FL display board

### Forward side

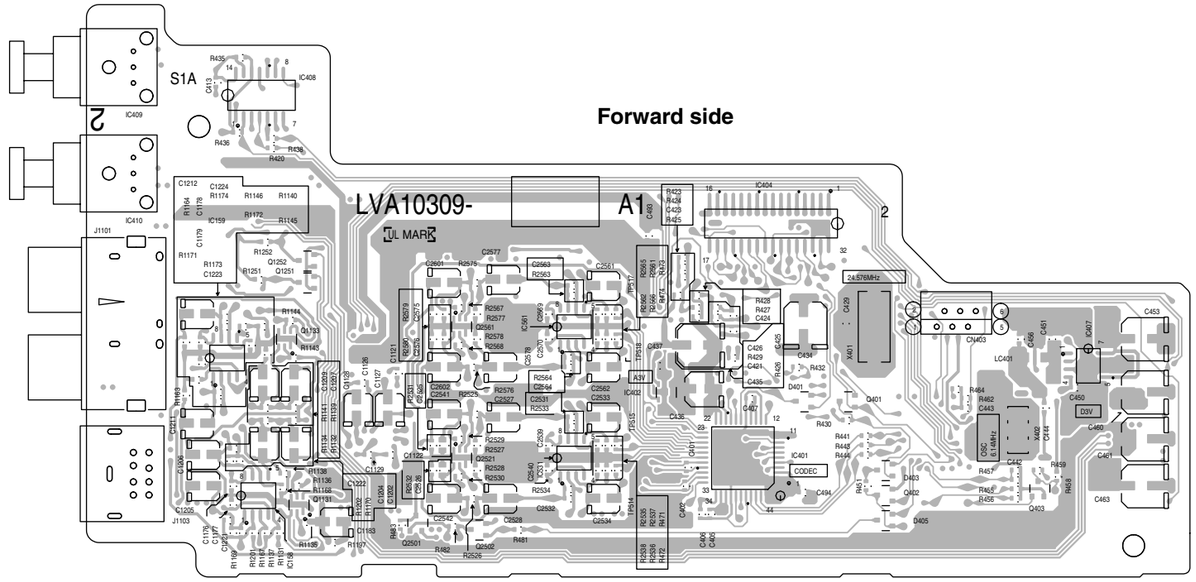



### Reverse side

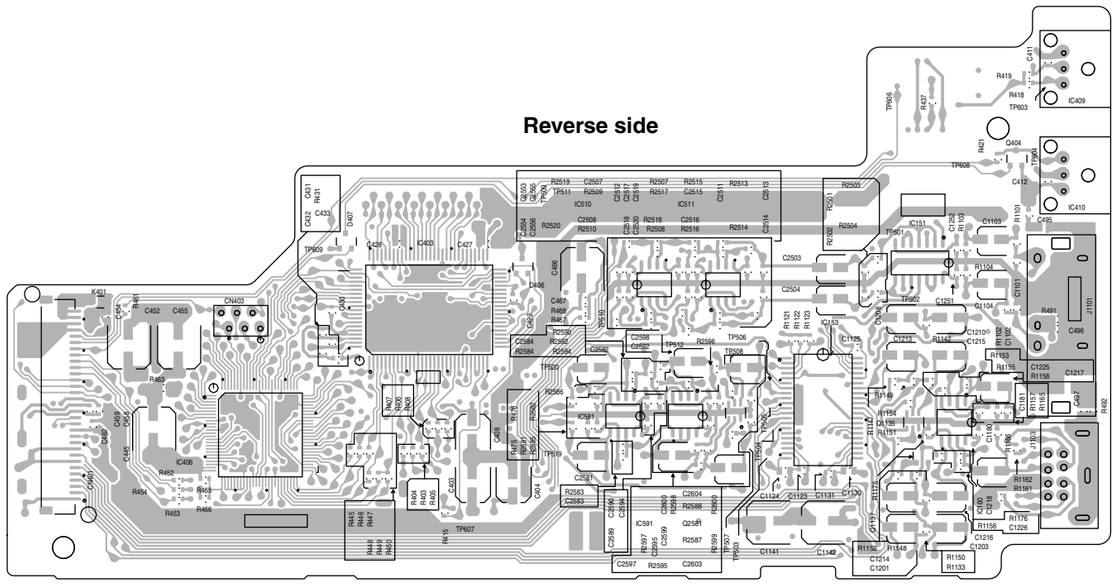


## ■ DSP/Audio board

### Forward side

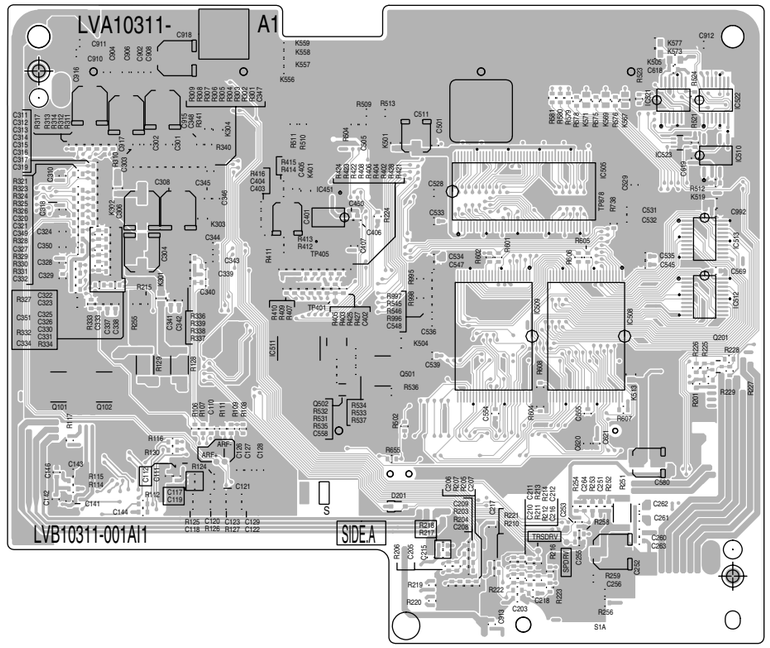



### Reverse side

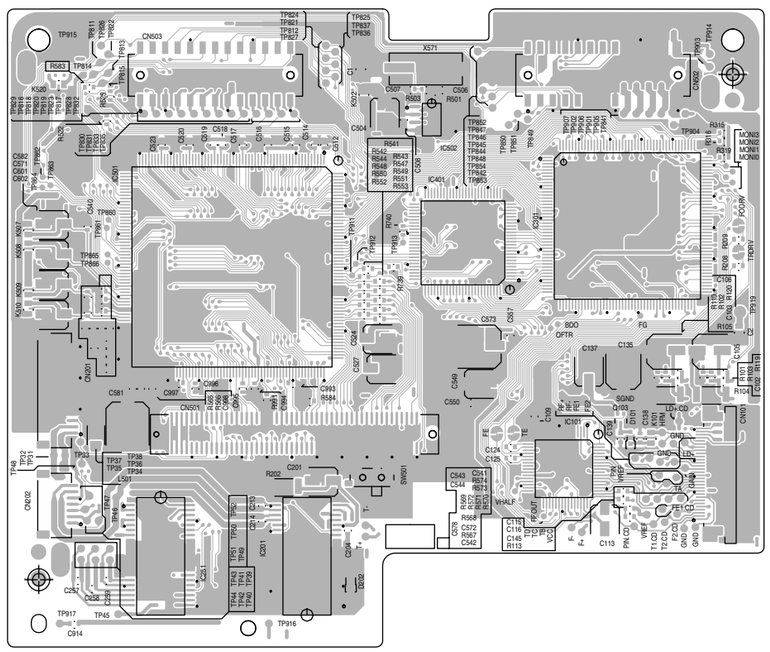


## ■ DVD servo board

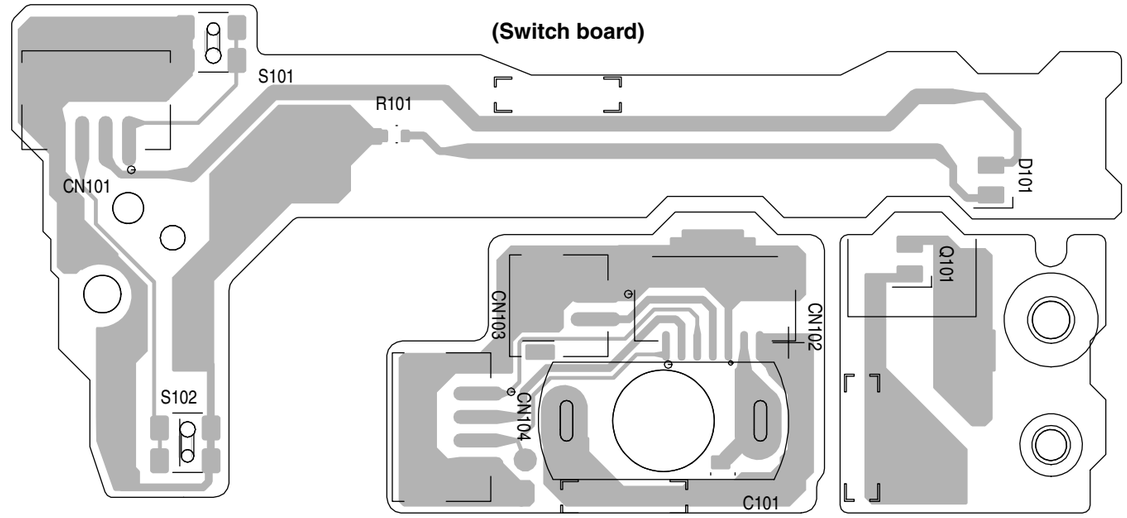
**Forward side**




**Reverse side**

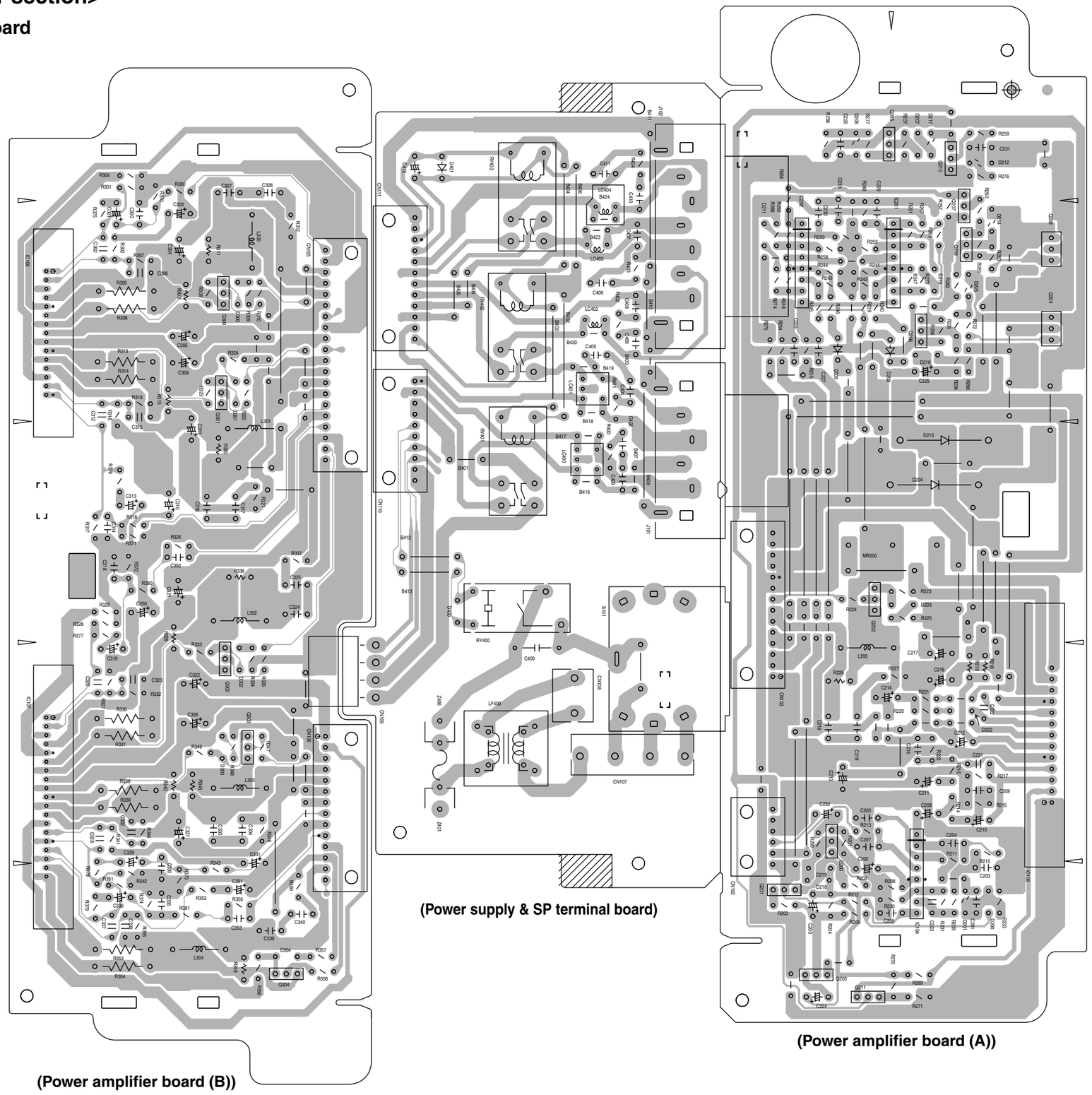


## ■ DVD loading board



## <Speaker section>

### ■ Main board



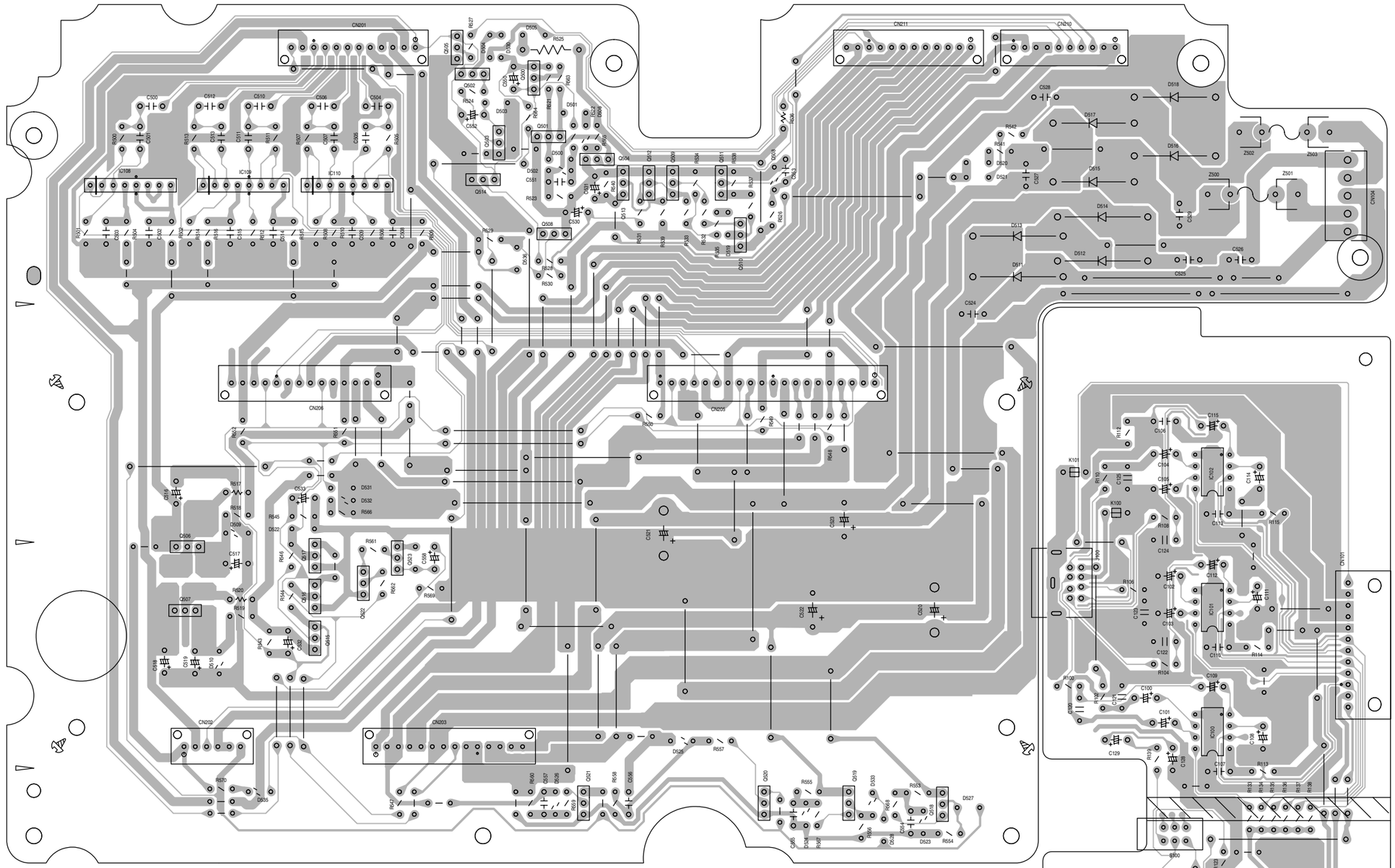
(Power amplifier board (B))

(Power supply & SP terminal board)

(Power amplifier board (A))

## ■ Sub board

**(Mother board)**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< MEMO >

JVC

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